• AUGUST 1956

BUTANE-PROPANE News

A CHILTON PUBLICATION

FEATURE SECTION ON CROP DRYING

930 HP Giant Lifts Face of Louisiana

HEADQUARTERS FOR L.P. GAS INFORMATION SINCE 1931

Soon . . .

Almost Double Capacity in Anchor Underground Storage . . .

Which means that when you contract with Anchor you are contracting for double reserves . . . double insurance for adequate supplies of gas. And Anchor is adding to their vast fleet of tank cars . . . Contracting with more producing plants of diversified ownership to make certain you'll get gas under almost any labor or production conditions . . . Increasing personnel for personal service . . . Adding to **all** facilities, nation wide, in order to remain your most dependable supplier. Call Anchor about a contract . . . Tulsa, CHerry 2-7261.

ANCHOR

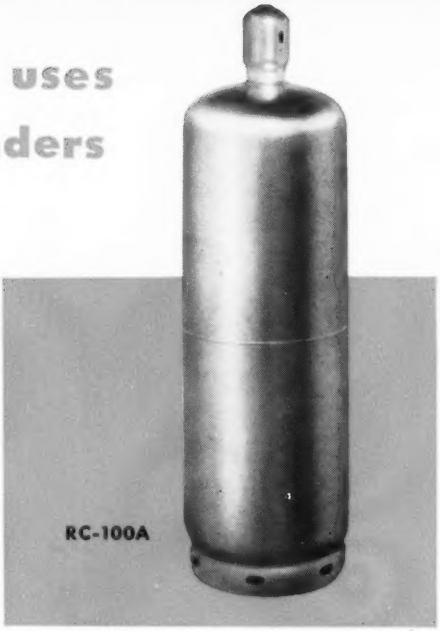
PETROLEUM COMPANY • TULSA

SALES OFFICES: Des Moines, Shreveport, Toledo, Houston, Long Beach, Oklahoma City, Midland, Texas, San Francisco, Seattle, Salt Lake City, East Patterson, N. J., Hattiesburg, Miss., Macon, Georgia, Minneapolis, Minn., Calgary, Canada.

Year after year the industry uses more Hackney RC-100A Cylinders than any other cylinder

There's no question about the popularity of Hackney Model RC-100A. This popularity is based on top-quality features that assure full value. Hackney two-piece construction assures light weight and handling economy. The single girth weld reduces seam area to a minimum. Controlled heat-treating increases strength and resistance to denting. Full-welded foot ring and two-coat bottom head protection keeps rust and corrosion from getting a start.

Follow the lead of experienced men in the industry. When you need 100-pound cylinders—order Hackney Model RC-100A, the most popular cylinder in the industry. When you need any other LP-Gas containers—from one pound to 30,000 gallons—call your Pressed Steel Tank or Downingtown representative.



Pressed Steel Tank Company

Manufacturer of Hackney Products

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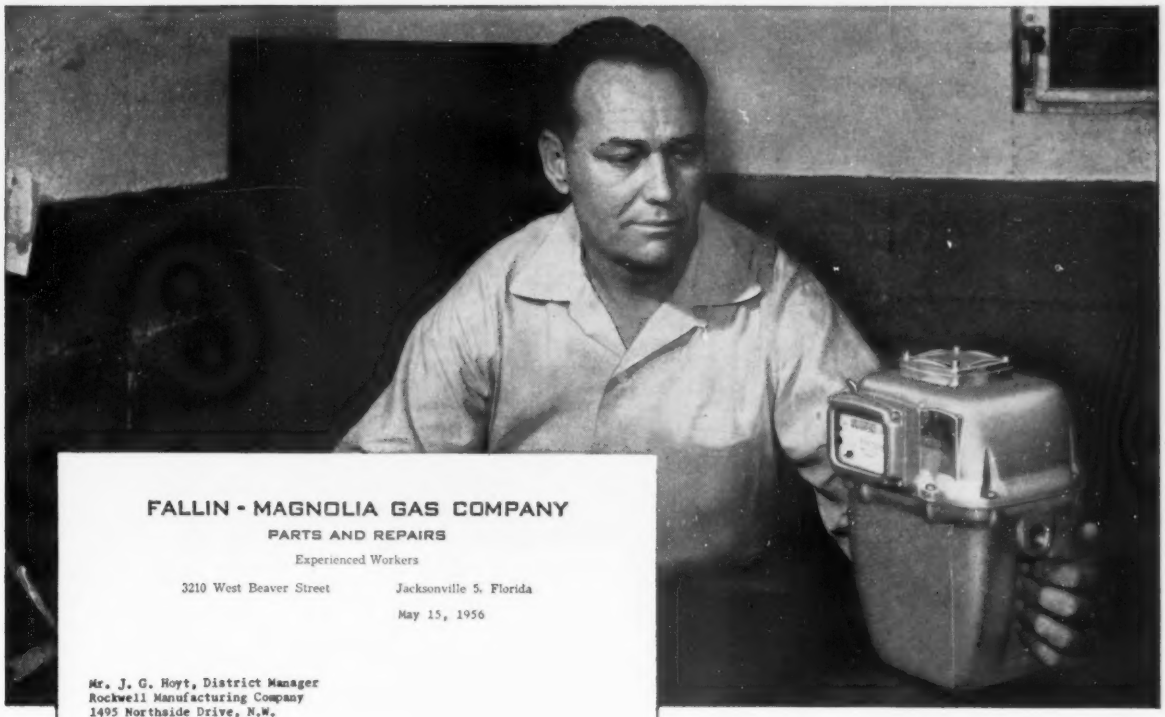
LP-GAS CONTAINERS FROM ONE POUND TO 30,000 GALLONS

Thank You, Mr. Fallin!

For Using and Recommending

ROCKWELL LP-GAS METERS



FALLIN - MAGNOLIA GAS COMPANY

PARTS AND REPAIRS

Experienced Workers

3210 West Beaver Street — Jacksonville 5, Florida

May 15, 1956

Mr. J. G. Hoyt, District Manager
Rockwell Manufacturing Company
1495 Northside Drive, N.W.
Atlanta 1, Georgia

Dear Mr. Hoyt:

For some time I have intended to write you about our experience with Rockwell LP-gas meters.

First let me say we have been completely satisfied with their performance. They are durable, attractive and easy to handle and install.

Our customers like metered service. In fact, we use metering as a selling tool. We also believe that our metered customers are more loyal to us and better satisfied than they would be buying gas in bulk by the liquid gallon.

From our own standpoint your meters have helped improve our service and reduce operating costs. With them we can route our trucks more efficiently, and we don't get out-of-gas phone calls either.

Your organization has always been most cooperative and prompt in handling our orders and in supplying us with literature and sales aids. It has been a real pleasure to do business with you.

Yours truly,

FALLIN MAGNOLIA BOTTLED GAS COMPANY

John C. Fallin

John C. Fallin
President

Good management goes hand in hand with good measurement. Good LP-gas property managers, like John C. Fallin, know that by metering their individual services they attract new customers, cut distribution costs, and increase profits. Why don't you investigate the proved Rockwell LP-gas meter plan? Write today for full details.

ROCKWELL

ROCKWELL MANUFACTURING COMPANY

PITTSBURGH 8, PA. Atlanta Boston Charlotte Chicago Dallas Denver Houston Los Angeles Midland, Tex. New Orleans New York N. Kansas City Philadelphia Pittsburgh San Francisco Seattle Shreveport Tulsa

In Canada: Rockwell Manufacturing Company of Canada, Ltd., Toronto, Ontario

TIME IS SLIPPING BY!

Are You Ready FOR NEXT FALL'S BUSINESS

THIS SHOULD BE No. 1 ON YOUR CHECK LIST...

☑ ALL TANKS FULL OF WARRENGAS

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WARRENGAS
the Concentrated fuel

WARREN PETROLEUM CORPORATION
TULSA, OKLAHOMA

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A CHILTON PUBLICATION

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AUGUST 1956

BUTANE-PROPANE News

Volume 18-Number 8

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It takes the work out of washday and eliminates weather watching for the housewife. It puts volume in the profit picture for gas appliance dealers.

TEMCO's

Automatic Gas Clothes Dryer

WITH WONDERFUL

Mistaway!

In addition to sparing thousands of housewives hours of drudgery and weather worries, the Temco Gas Clothes Dryer banishes clothesline clutter, opening up the backyard for pleasant outdoor living.

*TRADE MARK REGISTRATION PENDING.

COUNT THE TEMCO SELLING POINTS...

- ★ High Velocity Mistaway Blower
- ★ Knee-High Push-Button Door
- ★ Exclusive Sun Dial— One Control to Set
- ★ Competitively Priced
- ★ Flush Wall Construction
- ★ Fixed Temperature Control for Safety
- ★ Lifetime Porcelain Enamel Heat Chamber
- ★ Large Drying Basket and Door
- ★ Designed for Equal Efficiency with All Gases
- ★ Approved by American Gas Association
- ★ Guaranteed by Good Housekeeping

Indoor Comfort!

MEMBER NATIONAL LP GAS COUNCIL

COMPLIES WITH NATIONAL SAFETY REQUIREMENTS · AMERICAN GAS ASSOCIATION · APPROVED ·

REPLACEMENT OR REFUND OF MONEY IF NOT AS ADVERTISED THEREIN · Guaranteed by Good Housekeeping

At last! A room heater that actually solves the cold floor problem!

It's a TEMCO, of course. Specifically, it's Temco's radiant vented heater that blows the warm air across the room at floor level! Show your customers its exclusive features and see for yourself that when it comes to Temco, telling equals *selling*—

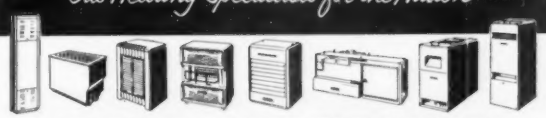
- ★ **20-year warranty on Ceramic-Clad* heat chamber.**
- ★ **Handsome contemporary design.**
- ★ **Cabinet finished in "Lifetime" Porcelain Enamel.**
- ★ **Approved by A.G.A., Guaranteed by Good Housekeeping.**

*TRADE MARK REGISTRATION PENDING.

TEMCO, inc.

NASHVILLE 9, TENNESSEE

"Gas Heating Specialists for the Nation"



"THE COMPLETE LINE OF GAS HEATING EQUIPMENT"

ROOM HEATERS • FLOOR FURNACES • WALL HEATERS • UNIT HEATERS
WARM AIR FURNACES AND AIR CONDITIONING

TEMCO, INC.
Department B-828, Nashville 9, Tenn.

Please send me catalog and complete story on
☐ Temco Automatic Gas Heaters
☐ Temco Automatic Gas Clothes Dryers

Name .....

Firm Name .....

Address .....

City ..... Zone ..... State .....

Special ROUTE-RATED® Nor-Tex PROFITABLE YEAR 'ROUND

STANDARD TWIN

Business small? Just getting started? Wherever you are located, the Nor-Tex Standard Twin is your best buy! This streamlined twin unit (1200 thru 2400 WG) is completely piped and ready to use with Viking mechanical seal pump, 50′ filler hose, ICC lights, P.T.O. and splines jack shaft. A complete "Package Unit."

DE LUXE TWIN

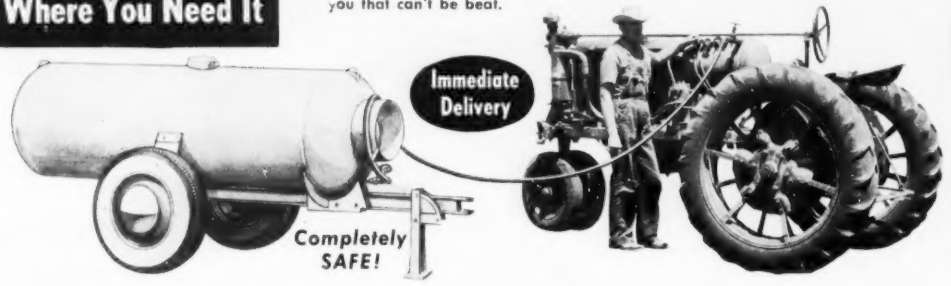
Here is the choice of the fleet owner! It is the finest looking unit on the road with plenty of big, roomy cabinet space. It is a complete unit (1200 thru 2000 WG) with Viking mechanical seal pump, 50′ filler hose, ICC lights, P.T.O., splines jack shaft and it is all piped and ready to use. A complete "Package Unit."

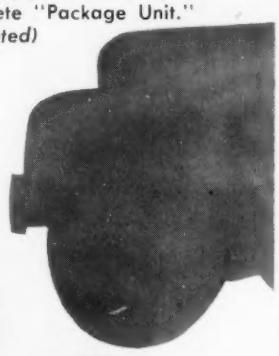
PAYLOAD SPECIAL

Get immediate delivery on this internationally popular Nor-Tex twin and save money, too! It has everything you need in sizes from 1200 thru 2400 WG. Viking mechanical seal pump, 50′ filler hose, ICC lights, P.T.O., splines jack shaft and it is completely piped and ready to use. A complete "Package Unit." *(Model illustrated)*

Spot Your Fuel Where You Need It

ATTENTION! NEW TRUCK BUYERS! Nor-Tex is regularly saving truck buyers hundreds of dollars on brand new Internationals . . . Chevrolets . . . Fords and GMC's. Order any particular unit you need. Nor-Tex will work out a deal for you that can't be beat.





NOR-TEX SCOUT

Safely place your fuel supply right where it's needed. Nor-Tex Scout is easy to "spot" with car, truck or tractor. Well-baffled, recessed relief valve, 12½′ delivery hose, ¾″ OIC valve and hose coupling. Heavy duty axle. Standard Chevrolet hub, 15″ wheels. Sturdy I-beam tongue. 150, 250, 300 and 500 WG sizes.

TRACTOR TANKS

"There's not a better ratio builder in the industry than those profitable tractor conversions." That's what one of our customers told us recently. It's a fact! If you are going to boost your winter ratio with increased summer sales . . . do it the *sure way* with tractor conversions. Nor-Tex Custom-bilt tractor tanks for all units.

PORTABLE PONIES

Boost year 'round sales and quotas with Nor-Tex "PONIES." Place them on farms, ranches, in truck and bus terminals, in highway service stations as well as "on-the-job" for contractors and utility companies. Built to W 250 Code requirements. Sizes: 500, 700, 1000, 2000 and 4000 WG. Choice of pumps, meters and accessories.

WRITE, WIRE OR PHONE FOR PRICES

Nor-Tex PRODUCTS COMPANY

National Sales Agents for

Complete LP-G Bottle Stations

PAT. PENDING

BALANCE YOUR LOAD THE

NORTH TEXAS

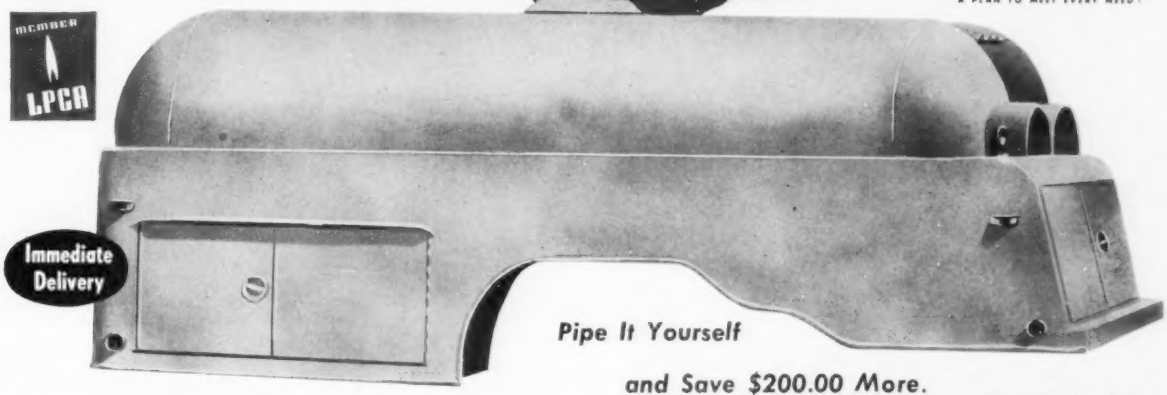
DELIVERY UNITS INSURE OPERATION AT LESS COST

"Habit buying and guess-calculation of delivery unit sizes by bulk plant operators becomes more and more hazardous as costs increase and profits decline. The need for job rated units is greater than ever." These convention facts point up Nor-Tex service. Nor-Tex "ROUTE-RATED" units are built to fit individual route needs, based on the length of the route, the terrain covered, convenient cabinet location, and trips required on peak loads . . . keeping a two-year eye on the future. The rule for profit today is . . . "Right-size units on the right chassis for the job." May we help you?

WE ARE AUTHORIZED TRUCK DISTRIBUTORS

Nor-Tex LOW COST LPG Financing
A PLAN TO MEET EVERY NEED

MEMBER LPCR



Pipe It Yourself and Save $200.00 More.

DOMESTIC TANKS
Factory to You
On Nor-Tex Transports

Built to last a lifetime! Nor-Tex tanks meet all national, state and local requirements. Complete satisfaction guaranteed. 2%, 10 days, in truckload lots delivered in our trade area.

Buy one or a truckload.

Priced Complete

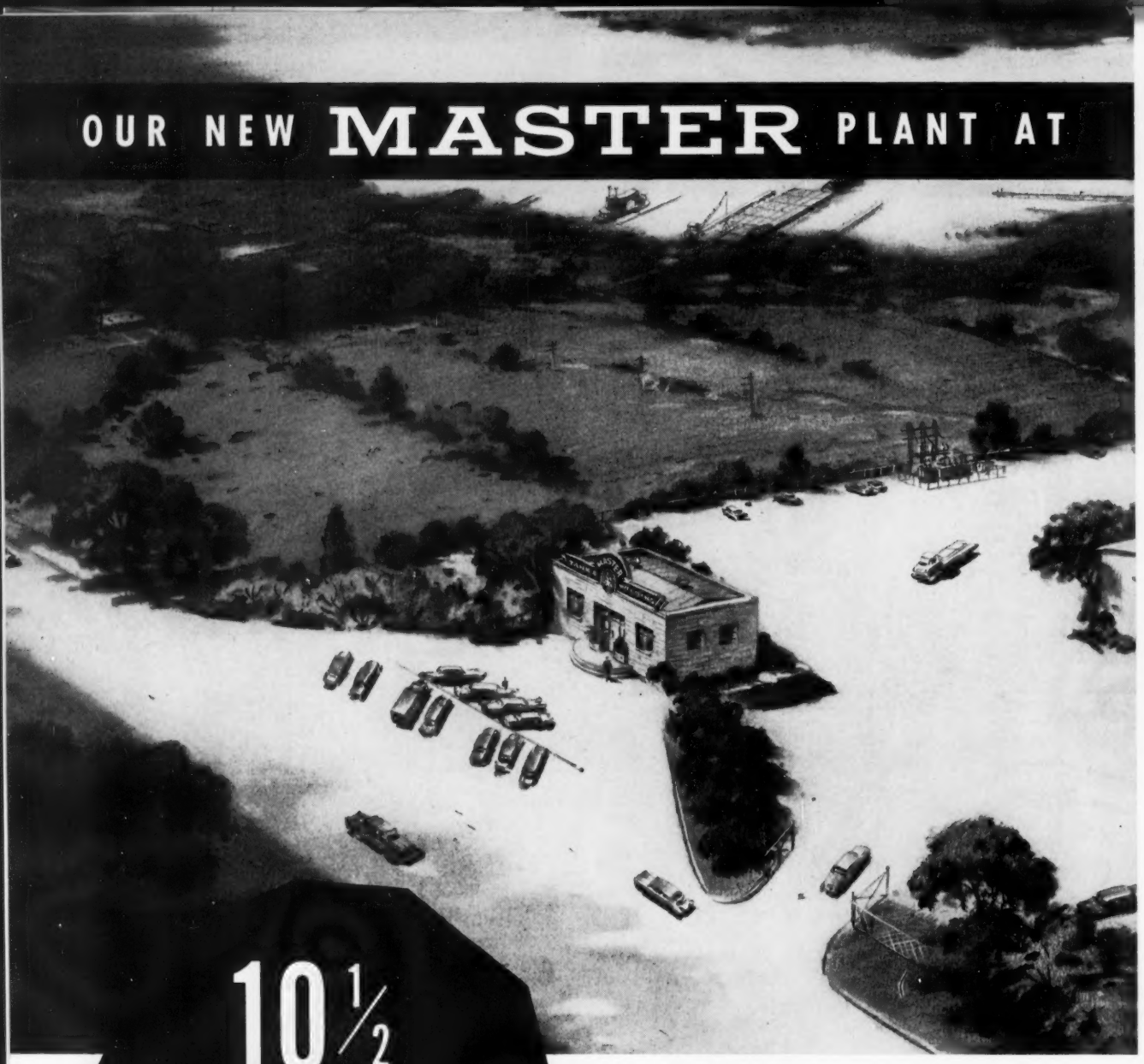
STANDARD TWIN Mounted On Your Truck	**$1,806.00**
DE LUXE TWIN Mounted On Your Truck	**$2,106.00**
PAYLOAD SPECIAL Mounted On Your Truck	**$1,956.00**

NOR-TEX WAY — FINANCE THE BALANCE

TANK CO.

P. O. BOX 1219
DENTON, TEXAS
CENTRAL 5416

OUR NEW MASTER PLANT AT



10½ ACRES OF PRODUCTION

The Most Modern

SERVED BY RAIL, BARGE AND TRUCK

A private railroad siding will run directly into the manufacturing portion of the plant, and the site includes a private dock on the Mississippi for the loading and unloading of river barges. This will enable Master to serve all parts of the world by water. An extra large yard adjacent to the plant will provide easy access to trucks.

2000 S Front Street • Quincy, Illinois

LPG Tank Manufacturing Plant in the World

In order to provide better, faster service for their many customers, Master Tank & Welding has expanded their present production facilities to include an LPG tank producing plant in Quincy, Illinois. The new plant, when completed, will be the most modern LPG tank manufacturing plant in the world, capable of producing 500 gallon tanks at the rate of 5,040 tanks a month. Within a year, according to plans, production facilities will be expanded for the manufacture of large storage tanks in capacities up to 30,000.

The management of Master Tank & Welding spent two years in a search for a centrally located site — one which would allow them to offer the best possible service to their LPG tank customers. Master will also stock truck tanks, air receivers and many other items now being fabricated in their Dallas plant.

MASTER TANK & WELDING

ANOTHER MASTER PRODUCT

P. O. Box 5146 • Dallas, Texas • PR-2441

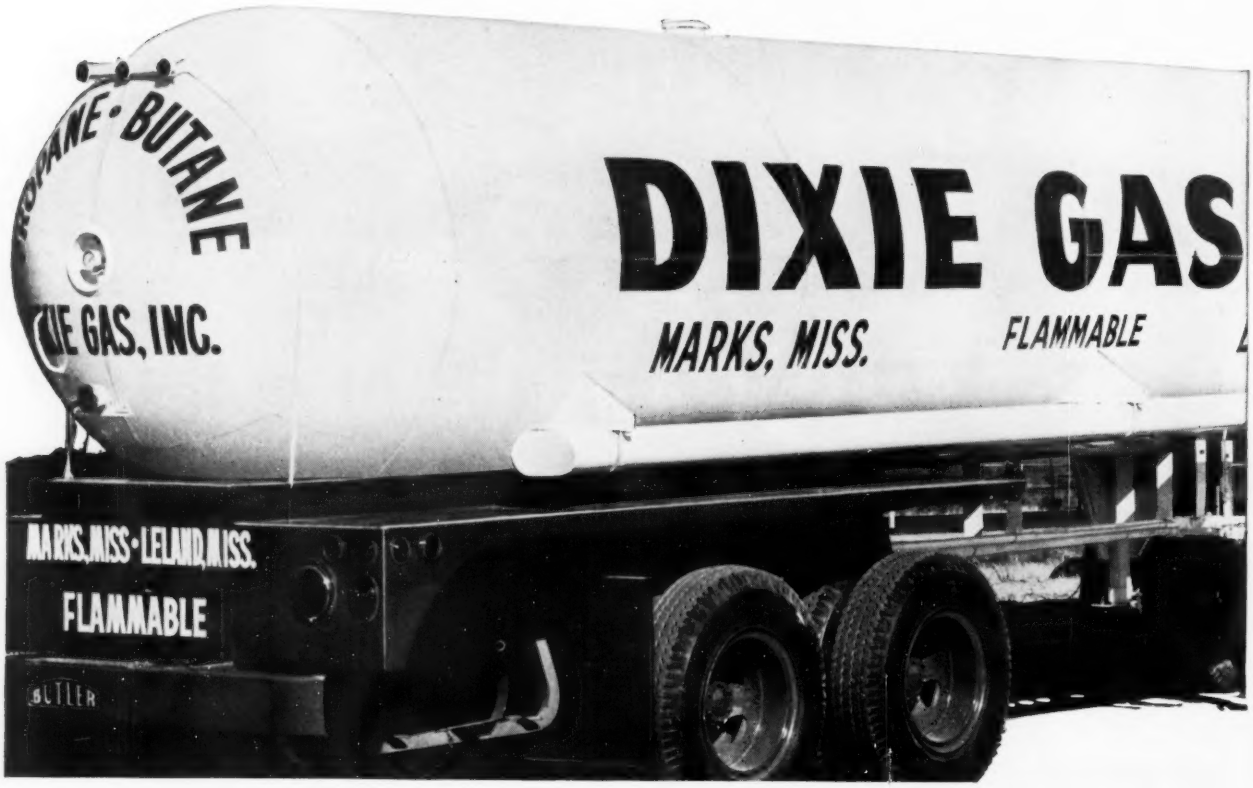
Sure, Butler gives you but that's only part of this

You profit many ways with the Butler Big B (big barrel) LP Gas Transport

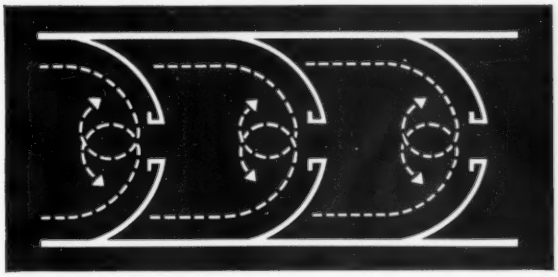
You get a 200 gallon payload bonus over most other single barrel transports because the Big B is "payload engineered" by Butler to eliminate every pound of non-essential weight. This has made the Big B 1000 pounds lighter than most single barrel units—and has added that much revenue-earning capacity that pays off on every trip.

Double-speed loading, made possible by Butler's advanced splash-filling, can help you earn more revenue and cut your investment costs at the same time. Filling time is cut in half, putting the Big B on the road 30-40 minutes ahead of other single barrel units. This means more trips and more revenue per day on short hauls. You can save thousands of dollars of additional transport investment because it takes fewer Big B's to handle short hauls.

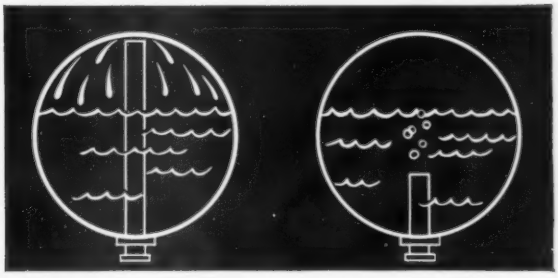
These years-ahead features are yours in a transport backed by Butler's quality construction, X-ray inspection and stress-relief procedures. This is why *you can be sure* of years of top profits and safe, low maintenance service with the Butler Big B.



top payloads...
transport's profit story



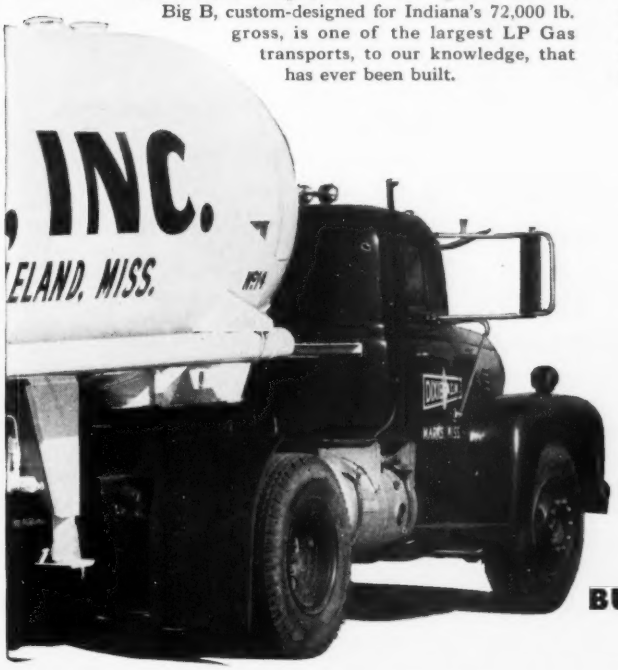
Exclusive surge plates assure smooth stops. Big B's cylindrical-type surge plates restrict forward-backward movement of the LP Gas load. Liquid flows against, then swirls behind surge plates . . . gradually moving through slots.



Why Butler's splash-filling means faster loading. Small amount of liquid is vaporized by splash-filling, cooling gas and reducing back-pressure on pump. Result: Pump works more efficiently, loads more LP Gas in less time.

A Record in Payload . . . 9400 gal. W.C. This Big B, custom-designed for Indiana's 72,000 lb. gross, is one of the largest LP Gas transports, to our knowledge, that has ever been built.

And for local deliveries you cut costs with big capacity Butler LP Gas Truck Tanks. Standard models 1200 to 2500 gals. W.C., larger sizes in custom designs. Literature available. Write for Butler LP Gas truck tank bulletin with all of the important details.



FREE Bulletin Gives BIG B Details
Write for Copy

BUTLER
STEEL PRODUCTS

BUTLER MANUFACTURING COMPANY

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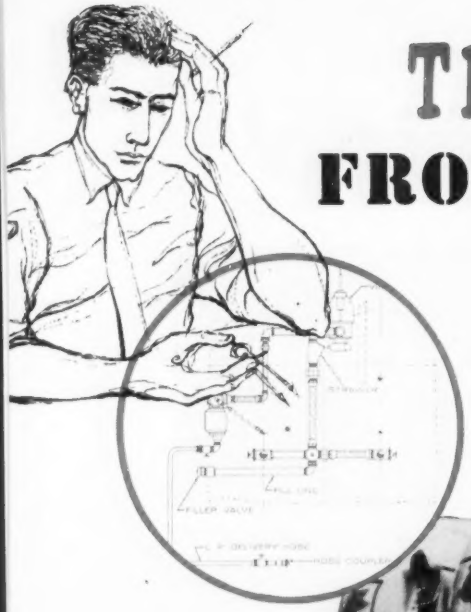
910 Sixth Avenue, S.E., Minneapolis 14, Minnesota
917 Avenue W, Ensley, Birmingham 8, Alabama

Manufacturers of Oil Equipment • Steel Buildings • Farm Equipment • Dry Cleaners Equipment • Outdoor Advertising Equipment • Special Products
Factories at Kansas City, Mo. • Galesburg, Ill. • Richmond, Calif. • Birmingham, Ala. • Houston, Tex. • Burlington, Ont., Can. • Minneapolis, Minn.



TRINITY'S FAMOUS
FROM DRAWING BOARD

X-rayed and stress relieved

Neatly designed skirting

Roomy compartments

Model 100 X 2450 W6 Twin, X-rayed and stress relieved.
250# WP- ICC MC-330

When you buy TRINITY you know that your tank is not only *Precision-Built* — but you are guaranteed TRINITY'S exceptional operating performance . . .
AND that means bonus payloads EVERY TIME. Why not be the leader with a truly distinctive TRINITY fleet?

Come and inspect our new manufacturing plant opening in late June. TRINITY Industrial District, Dallas, Texas.

the NEW TRINITY STORY

Write today for your beautiful 18-page booklet covering the entire Trinity line of truck tanks, storage tanks and transports.

MEMBER LIQUEFIED PETROLEUM GAS INDUSTRY LPGA

— TATSA —
Tanques de Aceros Trinity
S. A. Calle Poniente
150-#734
Mexico 16, D.F.

4001 IRVING BOULEVARD

PRECISION ENGINEERING
TO DELIVERY... throughout!

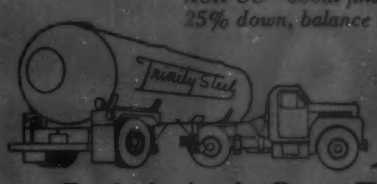
TRINITY'S THE FINEST THERE IS...

"THE MARK OF PRECISION ENGINEERING"

HERE'S YOUR TRINITY PAYOFF —

- Advanced designs
- Rugged construction
- Quality materials
- Low operating costs
- High payload profits
- Real TRINITY know-how

ASK US—about financing your new trucks. 25% down, balance monthly.

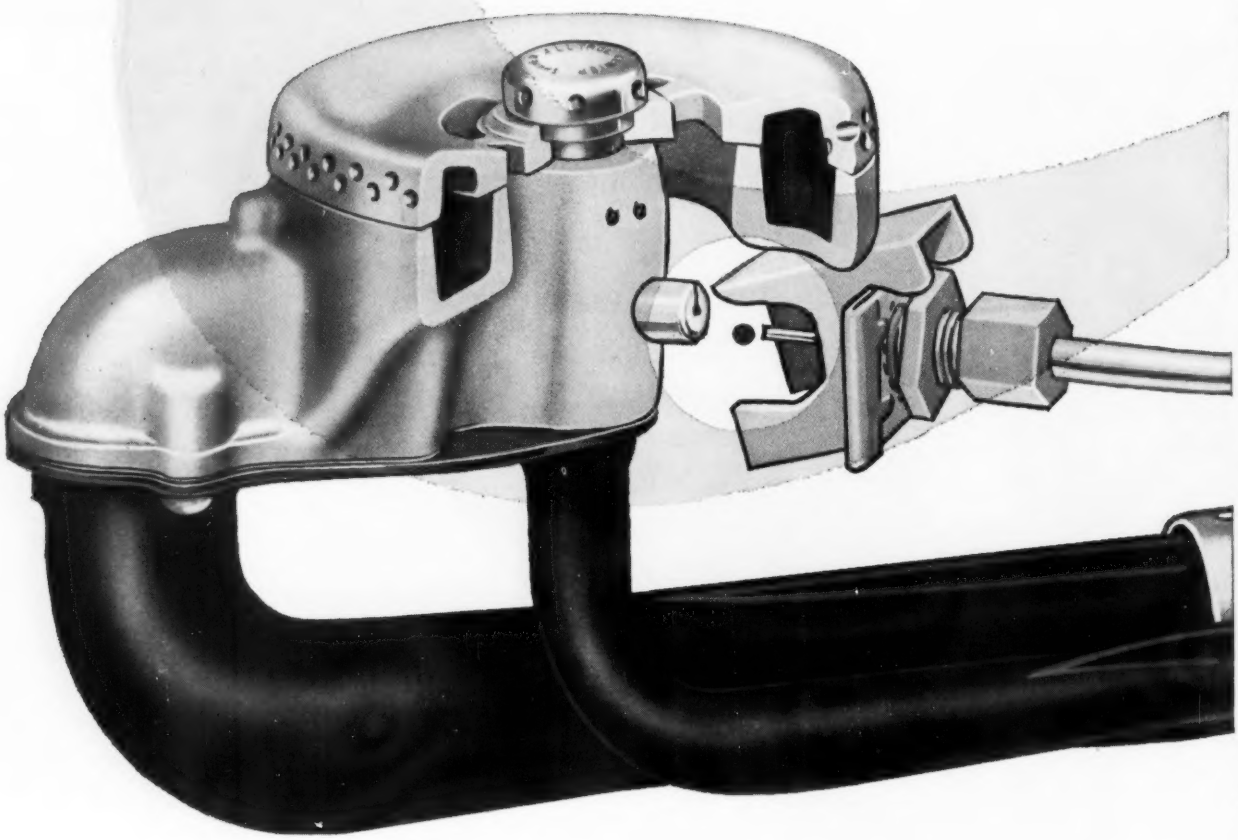


TRINITY STEEL COMPANY, INC.

EVEREADY GAS SYSTEMS

DALLAS, TEXAS FL7-3961

Here's *why* there's such a in the use of HARPER



You can sell MORE ranges with HARPER MICRO-LITE!

RANGE MANUFACTURERS: Take advantage of the sales features MICRO-LITE can add to your gas ranges. It is precision manufactured . . . tiny, stable flame is shielded from outage . . . is positioned to insure instant lighting. MICRO-LITE is ideal for thermostatically controlled top burners. You'll be surprised how quickly the assembly can be fitted into your ranges. Write today for further details and cost estimates.

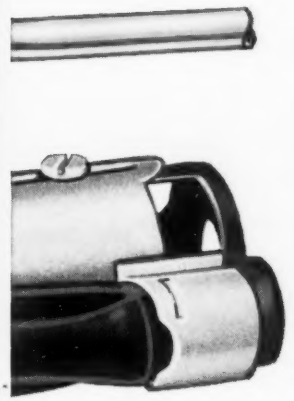
ALLTROL® CENTER SIMMER

tremendous increase

MICRO-LITE

the tiny pilot at each burner that gives instant ignition

- **INSTANT IGNITION WITH SMALLEST PILOT FLAME POSSIBLE**
- **KEEPS TOP OF RANGE COOLER**
- **ENGINEERED TO FIT ANY RANGE TOP BURNER**
- **AN EASY-TO-DEMONSTRATE SALES FEATURE**



There is extra sales appeal to ranges equipped with tiny-flame, instant-ignition MICRO-LITE top burner pilots. For when housewives feel the cool range top . . . see for themselves how fast and sure the burners light . . . sales come easier. And you've another important story to tell: MICRO-LITE requires no more gas—and often less—than the ordinary flash-tube ignition systems.

Another Product of HARPER ENGINEERING

HARPER-WYMAN COMPANY

DEPT. H86-B • 8550 VINCENNES AVENUE • CHICAGO 20, ILLINOIS

ORIGINATORS OF CENTER SIMMER BURNERS

This cab lets you TAKE IT EASY on tough jobs!

Modern features in new Chevrolet truck Flite-Ride cabs make your work easier and safer than ever before . . . give you the pleasure and prestige of style that equals many passenger cars!

Those numbers in the picture (right) point out features that make business almost a *pleasure* when you work behind the wheel of a modern Chevrolet Task-Force truck! Here are some of the reasons why hauling in a Chevy is *easy on you:*

❶ *Concealed Safety Steps*—located *inside* the doors—stay clear of snow, mud, and ice, give you firmer, safer footing. ❷ *Spacious leg room* helps keep you comfortable all day long, brings you home fresher and more relaxed. ❸ *Nu-Flex seat* design means *comfortable* hauling! Jack-stringer springs give ideal body support; seat back adjusts easily. ❹ *High-Level ventilation system* keeps the cab interior clean, cool, comfortable. Intake is at the bottom of the windshield—away from road heat and dust. ❺ *No-Glare instrument panel*, with handsome two-tone finish, puts instruments and controls within easy sight and reach. ❻ *Panoramic windshield* provides a full 1000 square inches of forward viewing area to make driving safer, easier. ❼ *Full-View rear window** adds to safe, convenient viewing as well as truck style.

And you'll find bright, stylish interior appointments that add to your sense of pleasure on the job. If your work calls for long hours on the road, you'll enjoy life more in a Flite-Ride cab! Check one over for yourself at your Chevrolet dealer's. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

These fleet, nimble light-duty Chevies help you get more done more easily!

Staying ahead of tight hauling schedules is a breeze in these modern trucks! Efficient short-stroke V8's* get you where you're going faster—and with good economy. Ball-Gear steering saves you time and work in traffic. And for the ultimate in easy going, there are power brakes,* power steering,* ***Hydra-Matic*** transmission!*

**Optional at extra cost.*

CHEVROLET

NEW CHEVROLET TASK·FORCE TRUCKS

Anything less is an old-fashioned truck!

Letters

Tank colors

California

We are very much interested in the article "Life Can be Beautiful in a Customer's Yard" (June BPN, p. 23), regarding the reflectivity of various colors of paint. This is, of course, not in our line, but we thought you might like to have some observations based upon studies of this subject drawn from experience with planetary astronomy (which is the writer's hobby).

While it is true that the lighter colors absorb less of the sun's heat, they also radiate less heat at night, after the sun sets. Thus, a black color, which absorbs close to 100 per cent of the sun's heat in the daytime, will radiate this absorbed heat very efficiently in the nighttime. Astronomers have a term for this, "a theoretically black body," which will radiate all of its heat.

What we are trying to point out is that much of the gain made by using a light color to absorb less heat in the daytime, may be lost because less heat is radiated at night.

When one attempts to apply these principles to our own business, which is, of course, the transfer of LPG from one tank to another, we run into a number of possibilities. For example, in order to aid in the transfer of LPG, the tank being filled should be arranged to be as cool as possible, while the tank being pumped out of should be as hot as possible and still be safe. If one keeps these principles in mind, they can be applied to a number of common transfer jobs, with interesting and, perhaps, unexpected results.

Let us take, for example, the farmer who has a tractor with an LPG engine and wants to refuel it from his domestic storage tank. We would say: 1. Paint the tractor tank *black*. 2. Paint the domestic tank *white*. 3. Fill in the early morning. If this were done, the tractor tank would radiate much of its heat during the cool hours of the night, while the domestic tank would lose little of its heat. The temperature differential resulting from this could allow for transfer without much bleeding of the tractor tank. If the farmer prefers to fill the tractor tank in the evening, he should have his tractor tank white and his storage tank black. This would not work out as well as morning filling, because the fuel tank might be hot from the heat of the tractor engine.

As another example, take an LPG distributor's delivery truck, which, of course, will be operating in the daylight hours. Paint the truck black (or red to make it look better), and have the consumer tanks being filled, white. The same thing would apply to a bulk plant. Bulk plant storage tanks should be black, and all user tanks or cylinders being filled should be white.

There are several things that confuse the issues when discussing the reflectivity of various colors. For example, our own eyes see only the visible rays from the sun. Yet, much of the sun's heat comes in the form of infra-red rays, which we cannot see. A paint that reflects or absorbs visible light, may work differently with infra-red light. We hope that the tests mentioned in the article were carried out with actual sunlight, not an artificial light that might have had different characteristics.

Another confusing thing that enters into this picture is the property of the atmosphere to "absorb" certain wavelengths of the radiation from the sun. Thus, test results could well be different in various areas of the world, depending upon altitude, humidity, the presence of fog, smog, or dust through part of the summer months, etc. Astronomers have a lot of trouble analyzing the light that comes to us from objects in space, due to the fact that our atmosphere absorbs so much of it and the amount of absorption is unknown and varies from one location to another. This is one reason why the great telescopes are nearly always placed on mountain tops. The finest telescope for planetary observations is that of the Lowell Observatory near Flagstaff, Ariz., which has an altitude of approximately two miles.

We don't mean to get you mixed up, but we do think that reflectivity is a much more complicated subject than the average engineer realizes. Your article was very interesting. We hope it will inspire some of the larger LPG distributors to do some real experimental work along these lines, as we feel that considerable could be done to speed transfer operations through the judicious use of various colors of paint.

With best personal regards, we remain

Very truly yours,
LAWRENCE W. SMITH

Congested area filling

Tennessee

I can find no regulation that would prevent a 1½-ton truck, with gravity filling system, from going into a trailer court and filling bottles in the court.

This practice is very prevalent among some operators. This would appear to be a hazardous procedure. If you can, will you please forward regulations on filling of cylinders in and around congested areas.

L.A.V.

There are no regulations to prevent the transfer of L.P. gas from one container to another by a gravity system. The transfer of liquid in a true gravity system would be entirely dependent on the pressure differential required for transfer coming from the difference in level of liquid in the containers. This

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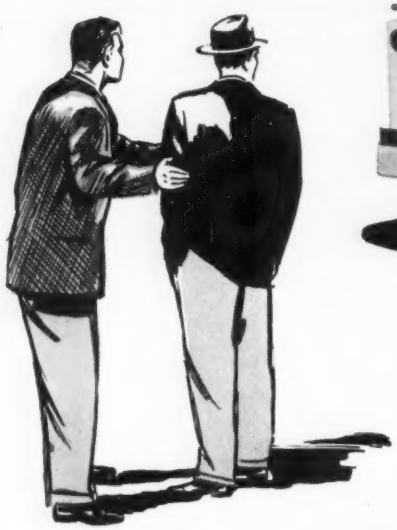

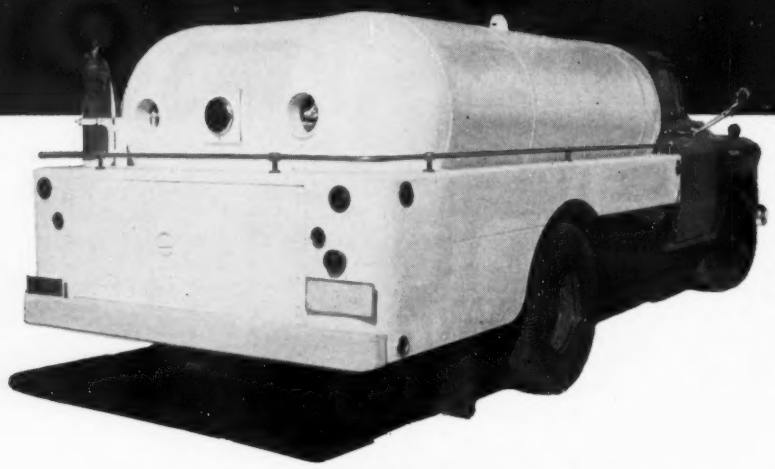

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Long after you've forgotten the original price of a piece of capital equipment, you remember how economical it operates, how efficiently it does the job, and how its general appearance impresses your customers. All of these features are incorporated in the design and engineering of the LMC Home Delivery Unit. Together they result in a performance that makes you, in profits, many times the original cost. All of the extras that add to your long range profit picture, but are sometimes overlooked in competitive models, are included in the LMC. Yet, the LMC Home Delivery Unit is competitively priced.

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can be done safely where conditions of elevation and proper liquid and vapor connections permit.

We believe you are referring to a practice which is often referred to as a gravity fill method, but is more truly a pressure differential method. Some of the energy required to transfer the fuel may come from the difference of elevation in the liquid level of the two containers, but most of the transfer is actually caused by a pressure differential. This is brought about by bleeding vapors from the container being filled and thereby reducing the pressure in that container. The higher pressure remaining in the filling container then causes the liquid to flow into the container being filled.

This is a hazardous procedure. The NFPA and NFBU pamphlets No. 58 have the following references to the practice:

Paragraphs B.13(c) — Gas or liquid shall not be vented to the atmosphere to assist in transferring contents of one container to another (except as provided in 4.4 (d)).

Paragraph 4.4 (d) deals solely with containers used in farm tractor service.

Paragraph 6.12 deals specifically with the filling of cylinders on trailers.

You should also check your own State and local L.P. gas codes.

Although the following paragraphs do not refer specifically to the transfer practice discussed above, we also refer you to paragraph B.5.(f), 3.6—Ed.

Not freeze-up problem

Nebraska

We have a freeze-up problem with one of our customers' tanks. It is a 1000-gal. propane tank supplying a 225,000 Btu ceiling heater and a 65,000 Btu circulating heater in a garage. It has a 2-stage regulation system, but about once a year in extremely cold weather we apparently get a freeze-up, as the gas supply is usually shut off during the night. Sometimes by morning when the temperature is still at a —10°, without heating up the regulators, the gas supply will come through again and the burners operate properly.

We put about 2 gal. of methol in the tank each year. Shouldn't this amount of methol take care of any moisture accumulation for more than the one heating season?

I.C.W.

Your "freeze-up" problem doesn't sound exactly like that. You are pulling about 3 gal. per hr., and a low fuel supply in the tank may pull the pressure down so that pressure becomes too low and the pilots fail, thus shutting off the burners and allowing pressure in the tanks to build up again. You probably fill when the trouble occurs, too.

The methanol will evaporate, too, as the fuel is drawn off and eventually be depleted. Therefore it should be replenished as fuel is used out.—Ed.

Pressure regulators

Minnesota

We have seen installations of steam vaporizers (600-900 gph capacity) where some have liquid pressure regulators immediately ahead of the vaporizer and where some have no liquid pressure regulators.

The installations that had pressure regulator stations were trying to maintain a constant pressure inside the vaporizer of about 30 psig.

Installations that had no liquid pressure regulators let the vaporizer pressure fluctuate as the pressure varied in the storage tanks.

In both installations, the vapor leaving the vaporizers was reduced to approximately 15 psig.

What are the advantages or disadvantages of having a liquid pressure regulating station ahead of the vaporizer? The vaporizers are used for either propane or butane.

A.N.A.

The reason the pressure regulators are sometimes used in the liquid lines at the entrance to vaporizers is to take advantage of the reduced temperature and partial vaporization of the liquid caused by the pressure reduction of the liquid.

It is well known that if an L.P. gas is heated, the pressure in its container will rise and that there is a specific temperature for every pressure where the liquid and vapor phases are in equilibrium, and conversely. Likewise, if the pressure is reduced, then a new balance will be reached at a lower temperature.

If the pressure of the liquid L.P. gas is suddenly reduced it will boil. If no heat is available, or it cannot reach the liquid fast enough, the heat will be drawn from the liquid itself, thereby cooling the liquid. A new state of equilibrium will be reached at the temperature corresponding to the lower temperatures. (See tables 3, 4 and 5, pages 26, 27 and 28 of the "Handbook Butane-Propane Gases.")

Some liquid is converted to vapor by the latent heat, so the vaporizer does not have to boil that portion. Secondly, the rate of heat transfer from one mass to another is in proportion to the difference in temperature between the two bodies or masses. If the temperature at which the liquid L.P. gas will boil can be reduced, then more heat transfer can be effected with the same temperature of the heat source and less heat transfer surface will be required, or more liquid can be vaporized with a given transfer area.

If the pressure of liquid propane is reduced to 30 psig, the temperature of the liquid is reduced to about plus 9°F. Note the large temperature difference over vaporising it at 60°F. The advantage for the butanes (normal and iso) is not as pronounced because of their higher boiling points.

The system also affords two-stage regulation with closer control of the final pressure.—Ed.

Poultry brooding

North Carolina

We would like to have your view on just how to supply gas to turkey or chicken houses that need approximately 6000 or 7000 Btu heat requirements. We are using 2-stage regulation with a high pressure and low pressure.

Should high pressure be necessary?

J.S.S.

We are enclosing tear sheets of two articles on brooders. We believe you will find them helpful. They are as follows:

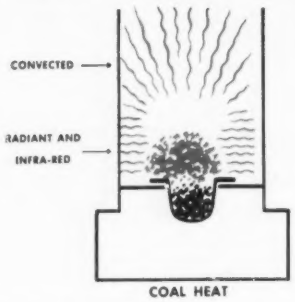
Butane-Fired Brooders Help Reduce Fatality Rate on Peterson Fryer Farm, BPN, April 1955, page 50.

History and Development of the LPG Brooder, by A. R. Wood, BPN, February 1954, page 37.

THE NEW BIG NAME IN LP-GAS HEATING

BURDETT "RADI-HEAT" CONVERSION BURNER

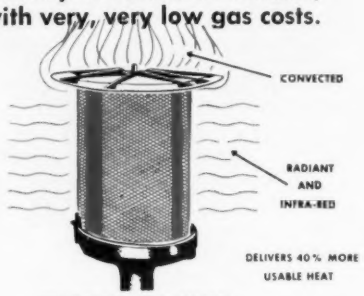
Sensational in its performance, silent and it may be hard to believe, "but owing to its scientific design" operates with very, very low gas costs.



MOST OF THE HEAT PRODUCED BY A COAL FIRED HEATING PLANT IS INFRA-RED AND RADIANT HEAT thrown off by a large mass of fixed carbon burning at the grate line.

THE REASON

Utilizes all of the heating surface with usable heat.



The "RADI-HEAT" gas conversion burner operates on the same heating principle used in the coal fired heating plant. A large mass of ceramic material in the center of the burner saturates the side walls of the heating plant with radiant heat. The expanding chrome steel surrounding the burner transfers large quantities of infra-red heat directly into the side walls of the heating plant, practically duplicating the condition existing in coal firing.

Increase your business—give your customers lower fuel cost—

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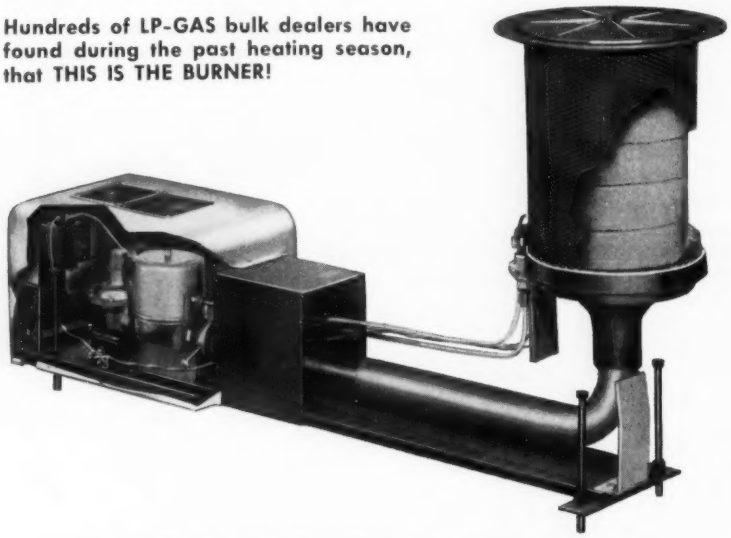
Wire or write for full details

Hundreds of LP-GAS bulk dealers have found during the past heating season, that THIS IS THE BURNER!



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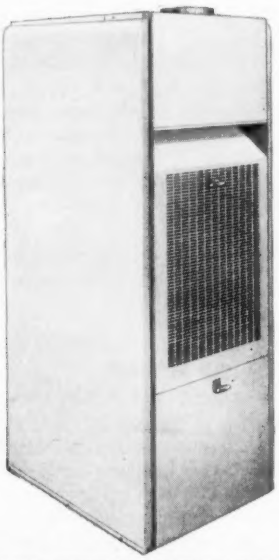

FREEMAN SPECIAL LP-GAS FURNACES FIRED WITH FREEMAN SILENT JET GAS BURNER

THE MOST EFFECTIVE LIVE DEMONSTRATION EVER USED IN THE HEATING INDUSTRY

ILLINOIS IRON & BOLT COMPANY

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It is not necessary to use 2-stage regulation in serving a brooder. However, there are some advantages which many dealers believe well worth the cost of the second regulator, especially when the delicate and expensive "product" is considered. These are:

1. More uniform gas pressure to each brooder. This is most noticeable where several rooms or brooders are served.

2. Smaller pipe size in the lines between the tank and the secondary regulators.

3. Two-stage regulation is considered a means of reducing the hazard of regulator freeze-ups.—Ed.

Heating fuels compared

Wisconsin

We have an architect who would like some definite information as to the cost of operation with a hot air furnace or a hot water boiler, propane-fired against No. 1 or No. 2 fuel oil.

The propane would cost him delivered 13 cents a gal., the No. 2 fuel oil would cost him 16.2 cents and the No. 1 fuel oil 17.2 per gal.

He would like any and all information that can be given to help him to present the pros and cons to his customers.

F.H.C.W.

We are enclosing tear sheets of the article "Meet the Oil Heating Competition on the Battleground of Efficiency," from our July, 1955, issue of BPN, pages 38-41.

This article presents the results of tests run by Consolidated-Edison, Philadelphia Gas Works and the Battelle Memorial Institute in Columbus. The results of all three tests are essentially the same. That is, oil is only about 58 per cent efficient, while gas is 73 per cent efficient.

This boils down to the fact that a gallon of 142,000 Btu oil (this is a generous heating value for furnace oil) delivers only the same amount of heat to the room as useful heat as about 1.08 gal. of 91,500 Btu propane, although to start with the oil contained as much heat as 1.55 gal. of gas.

Based on propane delivered at 13 cents (13 x 1.08) or 14.04 cents worth of propane will supply as much heat to the room as a gallon of the 17.2 cents oil and probably more than the gallon of 16.2 cent oil.

In addition, no electric power will be required to operate the gas burner, and no service costs will be involved to clean and maintain the gas burner each year as is required for the oil burners. In accordance with the enclosed article this will amount to $25 or $30 per year.—Ed.

Aggregate drying

Florida

In reference to your article in BPN concerning asphalt aggregate plants, I would like to have some further information, although the article was very complete.

I understand from the article that gas was only used to pre-heat the oil for the drying of the aggregate in addition to heating and maintaining heat to the asphalt tanks. If this, is so, why was gas not also used on the aggregate drier?

I have a plant here that is bothered with a smoke problem and I have assured them that propane gas will eliminate it.

Could you give me the cost of the oil and the kind used (Btu per gal) in the aggregate drier? Also, the firing time and capacity per hour on the aggregate drier and the Btu input and output using oil?

As you can well understand, our laid-in cost on propane is approximately 10 cents per gallon whereas the selling price in the article was 10 cents. Could you give me the laid-in cost of the supplier on the West Coast for comparison purposes?

E.S.M.

The use of propane for heating the asphalt and the fuel oil for the aggregate driers eliminated the installation of an expensive steam boiler. The cost of operating a boiler, even on heavy fuel oil for heating the asphalt and oil is expensive, because of the boiler efficiency, coupled with heat loss in the steam circulating lines. Direct gas-fired oil heaters are more efficient than an oil-fired boiler to start with, and the heat loss from transmission pipes and steam leaks are eliminated. Maintenance costs are cut to a minimum.

So, two economic advantages appear immediately: (1) lower capital investment because no boiler is needed, and (2) lower oil and asphalt heating cost because of the high efficiency gas-fired heaters.

The gas-fired oil heaters with temperature controls insure efficient gas usage and produce closer control of the fuel oil temperature. To burn efficiently, heavy fuel oil must be delivered to the burners at a closely controlled temperature. The gas-fired heaters can do this efficiently and respond to variations in demand and temperature immediately. The close control of the fuel oil temperature provides more efficient burning of the fuel oil in the aggregate dryer. It also will reduce smoke and soot problems when burning the heavy fuel oil.

We do not know the exact cost of the heavy fuel oil used to dry the aggregate laid in at the plant described, but believe it is around 6 or 7 cents per gal. This makes it very difficult for L.P. gas to compete. The oil has a heating value of about 150,000 Btu per gal.

However, L.P. gas has its place in this system and is doing a good job. Better to take a portion of the fuel load than none at all.

We believe the trouble the plant in your area is having with smoke is caused by improper burner maintenance and fuel oil temperature to the burners. It is also possible that the design of the kiln combination space is not as good as might be desired.—Ed.

Comparative tractor costs

Texas

Do you have any statistical type information on the comparative costs of diesel tractors versus LPG tractors?

We are having quite a problem in this area in losing business to the diesel tractors. We have been unable to get figures which to use in stopping additional sales of diesel equipment.

Any assistance you can supply will be greatly appreciated. W.C.A.

Both the University of Nebraska and the University of California Colleges of Agriculture have published bulletins giving a theoretical basis on which operating costs of diesel, gasoline, and LPG tractors may be calculated on the basis of local fuel costs and a rather simple formula.—Ed.

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Large storage facilities, both above and underground

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A Tuloma sales contract—with your signature on the dotted line—will immediately take away all the worry and add more profit to your peak season just around the corner.

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beyond the mains

FARMING HAS COME A LONG WAY since man first discovered that the seeds of certain plants could be dried and stored to provide food during the long periods when edible crops could not be taken fresh from the field. Mechanical power has taken the load in most processes where labor was formerly required in the production, harvesting, transportation and storage of farm crops. But in that one vital process of curing grain, seed and forage crops for prolonged storage most farmers still follow methods that have improved but little since the dawn of civilization.

On most farms these crop curing processes are still at the mercy of undependable weather. It no longer needs to be that way. But the change could not come until a practical means was developed to combine power with controlled heat to accomplish with certainty what the weather might not do at all. Electric controls made scientific crop curing possible. Propane has made the process practical and profitable. The necessary equipment has been developed and is available for sale.

In spite of the fact that its value has been proved by experience, mechanical crop drying is not yet in widespread use. But it is on its way, and will soon become one of the important agricultural uses for L. P. gas. You need to know the answers, because they will affect both the volume and seasonal balance of your "load." Our feature section this month is devoted largely to supplying you with those answers. We take pride in our traditional leadership in supplying the earliest and best information on these important new industry developments.

DO YOU REMEMBER THE SHARP OPERATOR who sold each item at a small loss and depended on volume for his profits? Is that unusual? How much profit should you be making on each pound or gallon of gas that you sell? Until you know that, and arrange to get it, you are in danger of being like the sharpie mentioned above. And here is something that might surprise the boys who trim the prices--and service--to get volume. Nobody wants you to do business without a profit. No, not even your customers. Price

Continued

wars do not benefit customers--they merely undermine public confidence in the companies doing the price cutting. Price wars promote skimped operation, which leads to unsafe practices and eventually to accidents and disrepute for the industry. And that makes it harder for all of the affected companies to stay in business.

Volume is not the key to profits. Four more things are required, and they are all personal qualities. They are (1) knowledge of your business; (2) the willingness to work hard for what you get; (3) the desire to be fair to customers, competitors, employees and the public; and (4) more courage than some people possess. The organization that has these qualities at the top need not worry about volume or profits.

SAFETY TRAINING AGAIN PAYS DIVIDENDS. For the past several years the Texas Butane Dealers Association has conducted a state-wide and continuous campaign and training program aimed at the reduction of accidents in the industry. On May 1 the Texas Board of Insurance Commissioners announced reduction in the rates for certain coverages required of or customarily carried by the L. P. gas dealers of that state.

These reductions include: 5 per cent on bodily injury and property damage rates on locally operated vehicles; fire and theft coverage on locally operated commercial vehicles went down 25 per cent, on intermediate operations, 20 per cent, and on long hauls 11.5 per cent; collision insurance on local vehicles went down 8.4 per cent, and on intermediate vehicles 12 per cent.

In advising the Texas Butane Dealers Association of these reductions the Commission commented most favorably on the association's well-organized safety program and the continued efforts of members toward reduction of accidents as factors contributing to the insurance record on which the reductions were based.

WE CHANGE PRINTING PLANTS. Beginning with this issue the printing and mailing of BUTANE-PROPANE News will be done in Philadelphia. It will make no difference to you except that you will receive your magazine a few days earlier. It works this way: the material for the magazine goes to Philadelphia by air mail. The Chilton Company plant, which is the largest and finest trade magazine printing plant in the world, does the printing and mailing in a week less time than was formerly required to get the magazine in the mail in Los Angeles. Philadelphia is closer than Los Angeles to seventy per cent of our subscribers, so there should be another small saving in delivery time to reach the majority of our readers. We like the arrangement, and hope that you do also.

Earl Abell

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can supply you!

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- **ANCO Bulk Plant Storage Tanks and Equipment**
  Contact Anco for installations of any size—a single tank or a complete plant.
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  Carried in our warehouse stock are units for all uses—Tractor Fueling Pumps, Hand Pumps, Bottle Filling Pumps, Bulk Plant Transfer Pumps, Truck Pumps—Compressors.
- **ANCO Cylinders and Systems**
  Our famous ICC PIG Cylinder is ideal for many uses — light domestic loads, farms, motels, restaurants, tractor refueling or standby unit. Replaces approximately four and one-half 100 lb. ICC Cylinders. Aboveground and underground systems available in all sizes for warehouse pickup or delivery. Check our low F.I.T. rates. Our equipment meets all existing regulations.
- **ANCO Valves, Fittings, Tubing**
  Large and complete stocks carried in our warehouses for your immediate use.
- **ANCO Hose and Couplings**
  Almost everything you'll need.
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  We stock these for every possible use and application.

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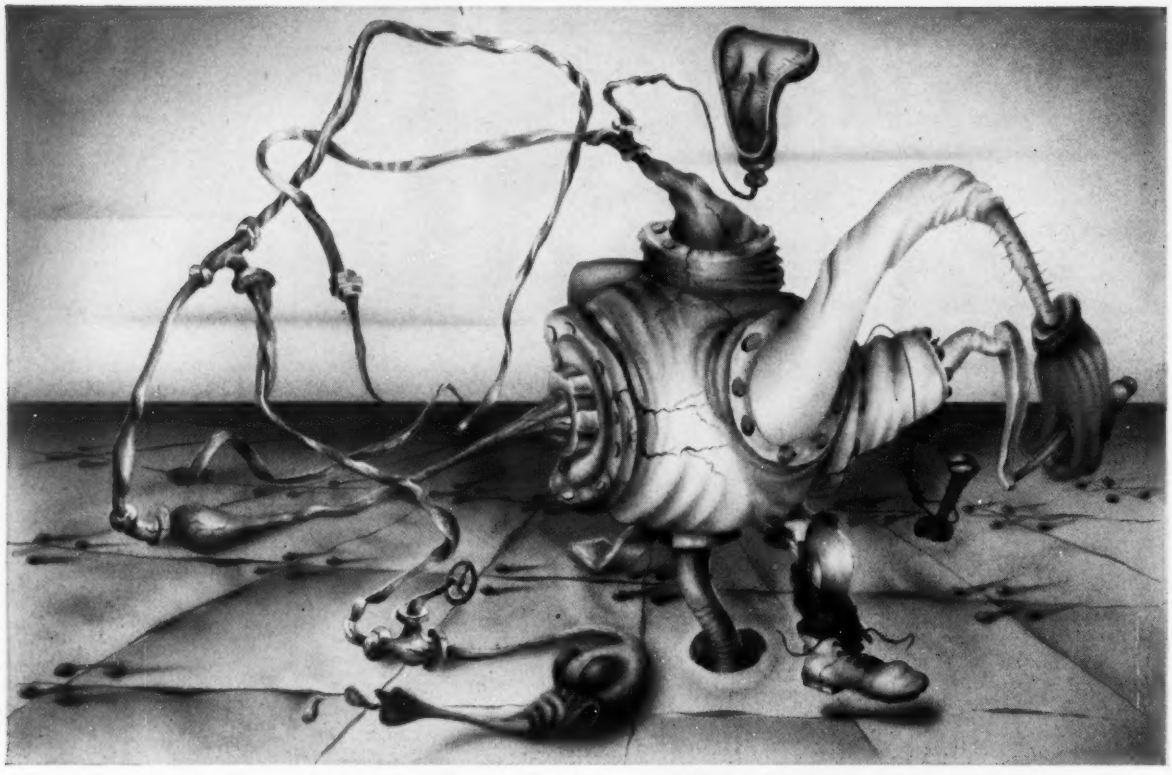

New HTIMS *Butane-Propane* PUMPS

Especially built to increase operating costs; but also ideal for dealers who have had trouble with SMITH pumps, as they are the *exact opposite* of SMITH pumps in every way.

- Very low list prices
- 150% discounts extended to all classes of customers
- Attractive price increases on quantity orders

LABOR Htims pumps are built by machinists' helpers without any previous experience whatsoever.

MATERIALS Htims pumps use only the cheapest scrap metal available.

OVERHEAD We reduce this to the absolute minimum by having **no factory at all,** and **no engineering staff** to bother you with pumping problems.

ADDITIONAL ATTRACTIVE FEATURES:

0. Unique design makes planning of piping unnecessary.
1. Built-in strainers, guaranteed never to clog. (The usually-troublesome screens have been omitted.)
2. No gears or impellers to move liquid; in fact, *no moving parts.* This assures Quietness and Long Life. Draws Less Power.
3. Shafts made of cheapest pot metal guaranteed to break before damage is done to any other parts.
4. *No safety approval of any kind.* Your insurance will be the most, to say the least.
5. Built-in bypass valves *will not open under any condition.*
6. 1,342 different models, beginning with our smallest 1-CM, with capacity of 0 GPM. Each larger Htims model puts out twice as much.

E-KILL-OH-WHAT? says:

"Htims pumps are the best. You owe it to your competition to specify this line on all future orders."

Descriptive literature unavailable upon request.

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CROP DRYING

. . . for farmers, a new era
. . . for LPG, a major market

BPN

August, 1956

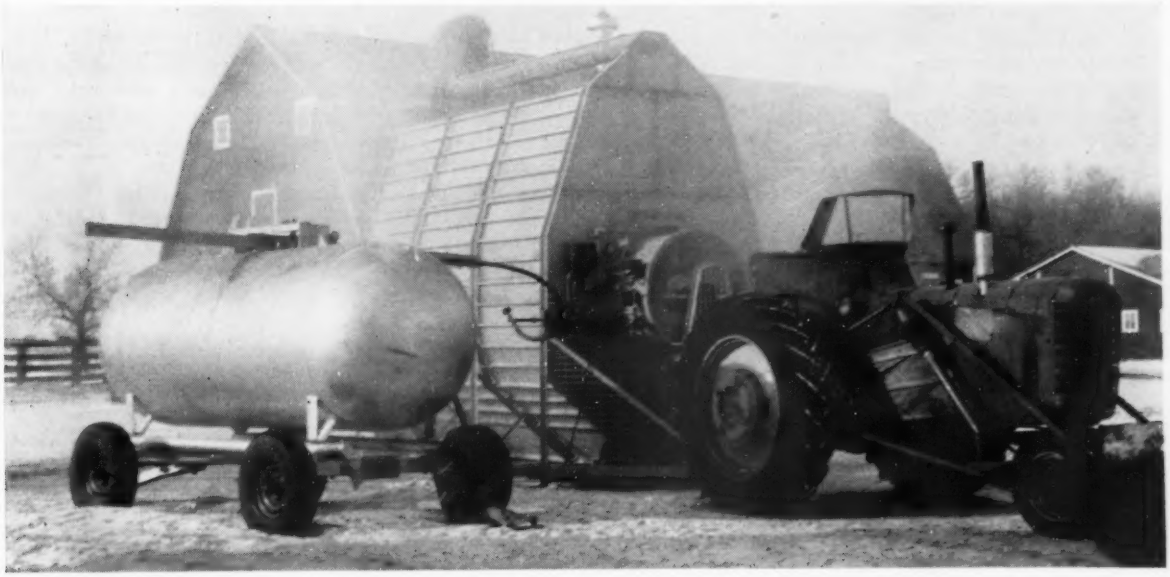
By ROBERT J. SIPCHEN and CARL ABELL

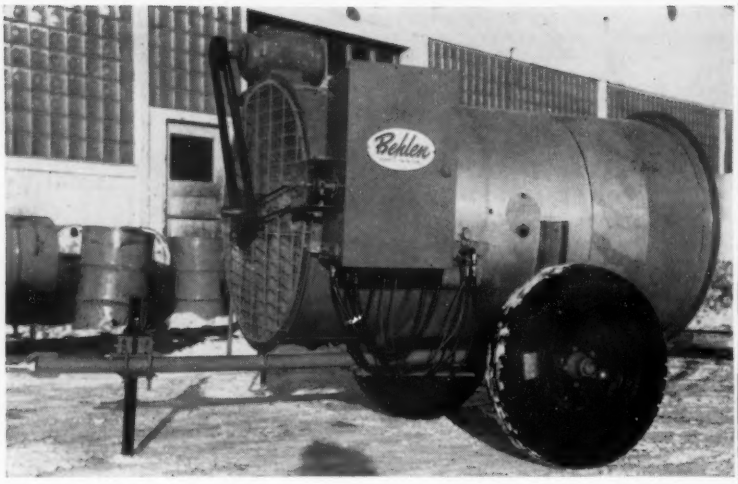
Artificial crop drying is not a new subject, but it is a tremendous undeveloped market for L. P. gas. The equipment is available, and considerable knowledge of its use exists. Crop drying by controlled heat is being promoted by agricultural authorities, farm magazines and leading farm organizations. We believe it will be the next great contribution to the effective balancing of the LPG dealer's winter/summer load.

WE think of modern agriculture as almost completely mechanized. In most of the processes which formerly required extensive muscular exertion, this is quite true. Mechanical horsepower has taken over much of the burden that made the farming of earlier times so hard on man and beast. But in one vital process, the curing of grain, seed and forage, crops that must remain for long periods in dry storage, most farmers are still practicing methods that have seen little improvement since the dawn of civilization. The curing of these crops is still at the mercy of the most fickle of elements—the weather. We have not done much about the weather, but in recent years agricultural engineers have made great strides in overcoming the effects of bad weather on matured crops.

Mechanical crop drying, which is still in its infancy but is due

Power and controlled heat make possible artificial crop drying, the next step in assuring the farmer success. Note cloud of steam driven off of moist grain inside L. P. gas-fired driver. Blower is driven by power take off from tractor.





A portable crop dryer allows movement from one set of storage bins to another. Mechanical drying allows early harvesting, lower costs, higher profits.

A Campbell dryer can be seen in operation just above cow in foreground on this Nebraska stock farm. Crop drying provides L. P. gas dealers with a big load during a slack season.

for rapid expansion in the near future, will be the next great step in providing assurance that the farmer will recover the full fruits of his labor. Artificial curing of these dry crops was made possible by combining power and controlled heat. Electric controls made the mechanical crop dryer possible, but propane made it practical and profitable.

The need for this insurance against complete or partial crop loss or loss of crop value was never greater than it is today. Mechanization of other operations has resulted in larger farms, larger investment, higher operating outlays, and larger losses when things go wrong.

Farming still rates as the world's greatest gamble. The farmer puts in his time, labor, last year's income, and all his hopes on the production of a profitable crop this year. He grows a crop to maturity, and then the greatest risks begin. His grain stands in the field, curing in the sun so it will be dry enough to keep until it can be marketed and used. Along comes a hailstorm and knocks the standing plants down so part of the crop can not be picked up by the harvester. And the heads that can be cut and thrashed have been shattered so only a fraction of the grain remains. Or a prolonged wet spell starts mildew in the unharvested crop. He must harvest and sell enough bushels to pay his expenses and support his family. He may not make it.

His corn may be delayed in maturing because of cold or dry weather at the start of the growing season. If it takes too long to mature and cold wet weather sets in before it is dry, the grains are soft and deficient in nutritive values. The market price is low, and the impaired nutritive value prevents him from feeding his livestock at a profit.

His hay may become wet by passing showers as it lies in the field to cure following mowing. Drag this process out long enough and it bleaches and leaches so the chlorophyll, vitamins, and minerals are greatly reduced. Let it dry a little too much, and the leaves, which contain the highest food values, shatter off. This reduces the marketable or useable tonnage, and at the same time wastes essential food values in the amount that can be saved.

Mechanical harvesting of any of the seed crops results in the scattering of more of the crop in the field than was the case with the old hand methods. The drier the crop during the harvesting period, the higher these losses become. If grains are harvested before the plants are completely dry, more of the stalks are standing erect so the harvester can gather them, and less of the grain is knocked out of the machine into the field. Early harvesting brings in a bigger crop. Harvesting corn with a mechanical picker shows even greater advantages for early operation. The ears can be snapped off the stalks much easier while the stem is still slightly moist. The drier the stems, the more frequently the picker clogs. Operation of the machine must stop while these obstructions are being removed. This raises the labor cost per bushel. Field losses are greater when the corn is drier before the harvest.

With any of these crops, harvesting at the stage when the machines work most efficiently and bring in the highest percentage of the yield produces grain that is too damp for bulk storage in large units. If weather conditions happen to be favorable, early-picked corn can generally be cured in bins on the cob. This requires twice the storage space that is needed to store shelled corn—and considerably higher investment in storage structures.

The modern mechanized farmer producing dry-storage crops has his choice of three courses. He may depend on natural drying in the field but he must accept the percentage loss due to the action of the harvesting machinery, and

Crop Drying

he must risk the weather damage that can come during those extra days the crop stands in the field. He may reduce his field losses and cut down the hazard of weather losses by harvesting earlier, and then risk storage losses due to too high a moisture content in the stored crops. Or he may harvest at the most favorable time from the standpoint of field losses and weather damage, and eliminate the possibility of storage losses due to dampness by reducing the moisture content to a safe storage level through the use of a mechanical crop dryer.

It all boils down to this: any farmer who uses harvesting machinery on dry-storage crops needs a mechanical crop dryer to get the highest efficiency out of his harvesting machines. The facts presented in the article that follows this one indicate most clearly that mechanical crop dryers pay for themselves very quickly by reducing these crop losses, and by maintaining higher quality in the crop through the storage period, so a higher unit price can be realized at the time of sale.

Ideal conditions for long term storage of dry crops begin with the reduction of moisture content to a level below which mildewing, souring, fermentation, or decomposition do not take place. All of these natural processes reduce the value of the crop. Buyers of freshly harvested grain and forage crops anticipate the effect of surplus moisture on storage losses, and compensate for their own cost of drying to prevent storage losses, by grading down and paying less for crops with excessive moisture content. Table I shows the gains in market value that can be made by the farmer who drys his own corn as it comes from the field. To this should be added the extra percentage of grain that he recovers by harvesting before the corn dries out on the stock, and from these figures should be deducted the cost of drying.

The question naturally arises, "What is the ideal figure to which the moisture content must be reduced for safe storage of these crops?" There is some slight variation, but with most of the seed crops, it is 13 per cent, and in special cases it is a little lower. Laboratory tests are no longer necessary to make the moisture content determination. There are direct reading instruments of both the "miniature oven" and the electronic types which can be purchased at low cost, and which can be used by any intelligent farmer.

Drying is accomplished by a number of methods, ranging all the way from adaptions built into existing farm equipment to complex combinations of drying and transferring equipment operating as part of enormous grain elevators. In between comes a group of factory produced batch and continuous drying machines which will probably become the largest total market for L. P. gas in grain drying.

The drying process consists primarily of blowing heated air through the grain. The simplest and least expensive drying machines are designed to pass heated air up through a batch of the grain, which is stationary while the process is going on. This is satisfactory, and produces reasonably uniform results, if the excess moisture to be removed is limited in quantity. The more moisture contained in the grain, the less uniform is the drying in the batch. That portion which is first reached by the heated air may be overdried, while that which is farthest from the source of heated air may not reach the desired dryness. As the air passes through the load, it is humidified and cooled by the evaporating moisture, so its drying efficiency becomes reduced. For high-moisture-content grain, the circulating type dryer produces quicker and more uniform results.

The mechanism of the several

Many types of crop dryers are on the market for the farmer ready to make the step. L. P. gas units make up 90 per cent of the sales of one manufacturer.

Controlled temperatures are important in crop drying. This Behlen unit is typical of dryers which reduce crop moisture and allow safe storage of shelled corn.

TABLE I. TYPICAL EXTRA MARKET PROFIT FROM DRYING CORN TO 15.5 PER CENT MOISTURE CONTENT BEFORE SELLING

Per Cent Moisture Content	Price of Corn—$ Per Bu	Discount Due to Moisture—Cents Per Bu	Shrink Loss Due to Drying—Lbs Per Bu	Shrink Loss Due to Drying—Cents Per Bu	Profit Due to Drying Corn to 15.5% Moisture
16	1.28½	1½	0.3	0.69	0.81 cents per bu.
20	1.13½	16½	2.5	5.81	10.69 cents per bu.
25	.93½	36½	5.3	12.31	24.19 cents per bu.
30	.73½	56½	8.1	18.63	37.18 cents per bu.
35	.53½	76½	10.9	25.07	51.43 cents per bu.

This table is based on cash grain market for 15.5 per cent moisture corn at $1.30 per bu. Typical moisture discounts used are 3 cents per bu. up to 17 per cent, 4 cents per bu. over 17 per cent.

Courtesy Lennox Furnace Co.

TABLE II. HEATED AIR GRAIN DRYING REQUIREMENTS

Grain	Safe Maximum Temperature of Drying Air	Maximum Moisture Content at Which to Start Drying	Minimum Air Flow—Cfm/Bu	Safe Storage Moisture Content
Seed corn	110° F	25%	5	13%
Wheat	140° F	20%	3	13%
Oats	120° F	25%	3	13%
Rice	120° F	22%	3	13%
Popcorn	90° F	25%	5	12%
Soybeans	140° F	20%	3	11%
Barley	140° F	20%	3	12%
Grain sorghum	140° F	20%	3	12%
Shelled corn	140° F	25%	5	13%
Ear corn	140° F	30%	5	13%

Courtesy Lennox Furnace Co.

TABLE III. FEED NUTRIENTS PRESERVED IN HARVESTING ALFALFA BY FOUR DIFFERENT METHODS AFTER SIX MONTHS OF STORAGE

Method of Harvesting	Number of Harvests	Dry Matter Percent	Protein Percent	Carotene Percent
Field-cured hay:				
Not rain damaged	3	76	69	2.7
Rain damaged	2	63	55	.6
Hay dried by forced ventilation:				
Unheated air	3	83	79	7.8
Air With Supplemental Heat	5	86	80	11.8
Dehydrated hay	4	90	79	23.6
Wilted silage	5	83	83	20.3

USDA Farmers Bulletin No. 2028

types of circulating dryers differs considerably, but their operation results in similar processes. A hot blast from the burner is diluted with air coming through the blower at atmospheric temperature. This controlled mixture is forced through the grain, which is introduced and distributed at the top of the dryer. It moves to the bottom by gravity, and is then sent back to the top by means of an elevator. The recirculation is repeated until the tests show that the desired dryness has been reached.

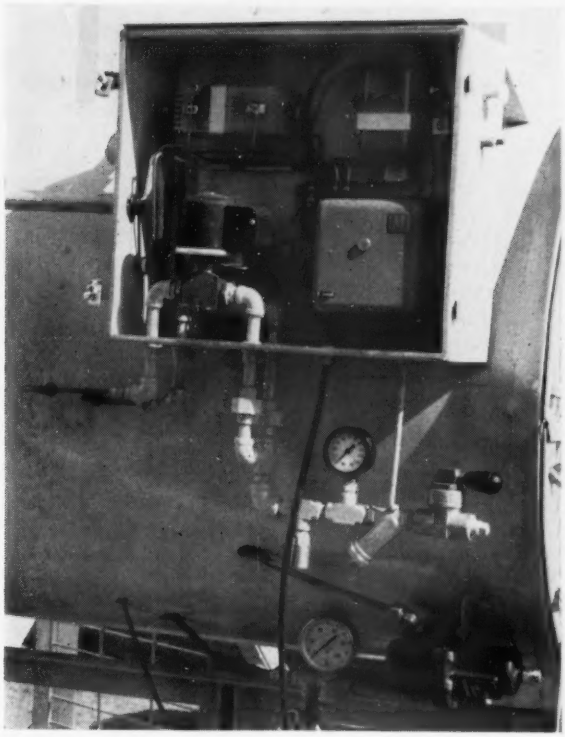
Because it typifies the operation of the circulating type dryer we quote the following, supplied by Habco Manufacturing Co.:

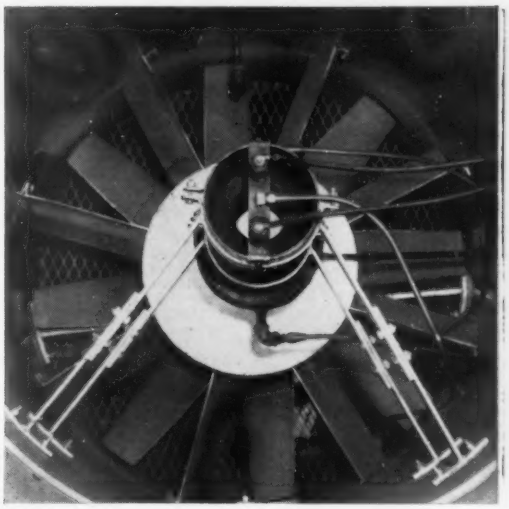
"The grain in columns approximately 20 in. thick recirculates from the top to the bottom of the column to mix the grain and obtain even drying. Heated air is forced through the grain as it moves through the drying column, where it picks up the moisture of the grain. The moist air is exhausted outside the column to the atmosphere. Experimental results have indicated that 20 per cent reduction in drying time can be achieved by recirculating the grain compared to regular batch drying. Uniform drying is also accomplished, with complete elimination of damp spots. Elimination of damp spots is necessary to insure against spoilage of the grain.

"It is apparent that as long as the moisture content of the grain is high, temperatures in excess of 110° may be used without raising the temperature of the grain above that point. The vaporization of the moisture lowers the temperature of the drying air, and has a cooling effect on the grain. As the drying progresses and there is less moisture in the grain, this cooling effect is diminished, and the drying temperature must be reduced to prevent damage to the grain. It is possible to use air temperatures as high as 180 to 200° for the initial stages of drying high-moisture-content grain. The temperature of the drying air is reduced as the grain dries. How much the temperature must be reduced depends on the use to which the grain is put after drying. The temperature of seed grain must be kept below 110° to avoid loss of germination. If grain is to be used for cattle feeding, no loss of feeding value is encountered if the temperature of the seed does not exceed 180°."

There appears to be some difference of opinion in regard to maximum permissible drying temperatures. This may be related to differences in equipment design. Authorities are in close agreement, however, on the permissible temperatures at the last end of the drying cycle, and on the allowable moisture content for safe storage. Table II gives the data published by Lennox Furnace Co. for the guidance of users of their circulating dryers.

It has been pointed out that the use of these temperatures permits faster drying rates and results in greater seasonal capacity of the dryers. Using 180° air, Habco





Up to 1 million Btu per hour can be attained with this burner. (Above) L. P. gas leaves no soot or odor in the grain.

L. P. gas crop dryers (left) are fully equipped with safety controls including airflow switch that stops burner if fan stops, fuel shutoff in case of flame failure, and pop off relief valve for excess fuel pressure release. This is a Habco unit.

claims that their "400" dryer will bring shelled corn down from 25 to 13 per cent moisture content in two hours. It has only been possible to attain these high temperatures with direct fired dryers. L. P. gas is the only fuel that can be used in farm type portable dryers and accomplish this drying rate. LPG burns clean, and leaves nothing to contaminate or affect the flavor of the dried grain. Any other available fuel, if used for direct heat, sends soot, unburned fuel, or other contaminants through with the air to deposit on the grain and scale down its market value. Electricity can be used for drying heat, but its output is much lower, and the drying time is much longer.

With the fuels that produce contaminants, it is necessary to use a heat exchanger. This lowers the efficiency of the heat transfer, and results in proportionately higher fuel consumption.

Figures compiled in a number of localities, and with atmospheric temperatures ranging all the way from 80° down to 5° below zero, show average cost for propane used in drying to be approximately one and three quarters cents per bushel, including fuel for the tractor that drives the fan. Original moisture content in the grain used in these studies ranged from 16.5 to 25 per cent.

Many of the circulating type dryers now in production utilize the farmer's tractor as the motive power for both the blower and the elevating mechanism. If the tractor operates on LPG it is customary to connect the engine fuel system to the storage tank that supplies the burner. By this means it is not necessary to disconnect the tractor PTO from the dryer and drive it to some other point to fill the tractor tank. It can stay right on the job and continue working as long as the drying job continues.

The fuel load resulting from grain drying reaches its peak during and immediately following the harvesting of the crop. With wheat, oats, barley, rye, dry beans, and soybeans this comes during the summer slump. Rice matures later in the year. It is almost universally dried by artificial means, and this fuel use extends into the early part of the heating season. Corn drying begins in the fall in the upper Mississippi Valley, and continues into cold weather. In the South and West, where corn is rapidly increasing in production, the season comes earlier. Regardless of where it is grown, it creates a market for drying fuel if the harvesting is timed for most efficient use of the machinery.

The volume of fuel used by the dryers now in service in the Corn Belt runs into impressive figures. Rural Gas Service Corp., Austin, Minn., reports having delivered 124,600 gal of LPG during a recent year for the operation of 18 dryers. A footnote to this report adds that several of the dryers were placed in service late in the season, so their consumption for an entire season would have been higher.

Some farmers have also reported

Heat from the L. P. gas burner in front of blower is blown through grain as grain falls down through the crop dryer.

secondary benefits from the use of crop dryers which are also of financial importance in the operation of their farms. In some states the earlier harvesting of corn has made it possible to plant a fall wheat crop. In the more arid states, fall plowing, following removal of a corn crop, results in greater conservation of moisture as well as the destruction of large numbers of insect pests. In areas where pheasants and other game birds are prevalent, considerable scattering of grain results from their efforts to feed on the crops that are standing in the field awaiting natural drying. Earlier harvest plus mechanical drying prevents a good percentage of these losses.

Weeds have a tendency to flourish rapidly once the grain is mature. There have been occasions in some areas when it has been impractical to harvest barley and oats because weeds had grown so profusely while the crops were drying in the field after maturity.

The corn farmer can use the dryer to cut down on his investment in storage space. Shelled corn occupies only half the space needed for ear corn. It is difficult to dry shelled corn to a moisture content suitable for prolonged storage unless a dryer is used. There is a normal decline of market price following the harvest season. Many times it is possible to secure a high price for corn that is ready to market a few days before the decline starts. Or it can be held over until the decline has passed and more favorable market conditions prevail. Corn and other grains produced in good crop years can sometimes be held over into a drier year, and then be sold at a higher price.

High yielding hybrid corn presents another problem that is solved by the use of a dryer. Most of these hybrids require a long growing season. If the planting happens to be delayed by wet weather, the crop matures so late in the season that it may not be possible to get it properly field dried. This results in losses that can be avoided by artificial drying. For this same reason, it is possible to grow corn considerably farther north than is possible without the dryer.

Artificial drying is not so widely used in forage crops as in grain farming. Larger equipment is required, and labor cost is higher than field drying requires during good weather. If the weather turns wet while the crop is drying in the field, however, this picture may be reversed, and much of the crop value may be lost. According to agricultural authorities, and to many farmers who use artificial drying for their hay crops, there are additional benefits which make the practice profitable.

USDA Farmers Bulletin No. 2028 points out that a considerable proportion of the protein and carotene in alfalfa is lost in field-curing, but much of this can be salvaged by artificial drying. Table III, reproduced from that bulletin, gives the results of the tests on which this bulletin was based.

Under the best conditions, the handling of dry hay between the field and storage or the baling process results in the loss of a certain percentage of leaves. The leaves contain more food value than the stalks. In feeding hay, the animals are inclined to feed selectively on the remaining leaves, and waste the stalks. The Dryer Manufacturers' Association has this to say about this situation:

The leaves of hay contain the most food value. When leaves are lost, the hay loses much of its nutritional value. And many leaves are lost when hay is left in the field to dry and is then handled after it is dry. By taking the hay in at a high moisture content, very

HAY HARVESTED 3 TONS (6,000 lbs.) PER ACRE	Total digestible feed value Equal to 2000 lbs. linseed meal / 2000 lbs. corn & cob meal	STEMS 3,000 lbs.	50% leaves 3,000 lbs.	
	Feed value lost in leaves Equal to 550 lbs. linseed meal / 200 lbs. corn & cob meal	STEMS 3,000 lbs.	40% leaves 2,000 lbs.	leaves lost 1,000 lbs.
	Feed value lost in leaves Equal to 800 lbs. linseed meal / 450 lbs. corn & cob meal	STEMS 3,000 lbs.	30% leaves 1,300 lbs.	leaves lost 1,700 lbs.
	Feed value lost in leaves Equal to 1250 lbs. linseed meal / 350 lbs. corn & cob meal	STEMS 3,000 lbs.	20% leaves 800 lbs.	leaves lost 2,200 lbs.

ACRES NEEDED TO PRODUCE EQUIVALENT FEED (U.S.D.A. Data)	FIELD-CURED HAY Requires 25% more acres than mechanically cured hay—for same feed value.	
	MECHANICALLY CURED HAY Requires less acres for same amount of feed.	

*From Crop Dryer Manufacturers Association.

MILK PRODUCTION PER ACRE OF HAY	MECHANICALLY DRIED WITH HEATED AIR		113%
	MECHANICALLY DRIED WITH UNHEATED AIR		108%
	FIELD-CURED—NO RAIN DAMAGE Set at 100% for basis of comparison		100%
	FIELD-CURED WITH SOME RAIN DAMAGE	80%	

Tables IV V VI

few leaves are lost. And by drying mechanically, they are more palatable and contain more nutrients than field-dried hay.

If hay, when it is cut, is 50 per cent leaves by weight and if the hay that is fed is only 30 per cent leaves by weight, the usable yield has dropped drastically. It would be like reducing a 3-ton per acre yield to only a little over 2 tons. The cost of buying feed supplements to replace that loss would be about $37 for each acre harvested. The cost of replacing the loss from a 20-acre field would be approximately $740! Mechanical drying can save most of those lost leaves, as Tables IV, V, and VI illustrate.

Many other crops, such as hops, peanuts, sweet potatoes, garlic and others, can be cured more efficiently with artificial heat than by field drying. The processes differ considerably from those used with grain and forage crops. Special information on these processes, and the advantages of propane for their curing, will be presented in later issues.

The use of mechanical dryers is being pushed by nearly every group that has an interest in the production and marketing of the crops that benefit specifically from such use. The preliminary period of experiment and introduction has now passed into history, and the era of expansion is coming up. The leading manufacturers have found that their equipment produces best results when burning gas—and for the farm installation that means L. P. gas. The stage is set for a tremendous development of the LPG load in this field. Dealers who promote crop drying now will be reaping the benefits from here on out. ■

Three corn-belt farmers report more crop $, less cost with LPG

By ROBERT J. SIPCHEN • Field Editor

When a new agricultural method or process is proposed, the farmer wants to know, "What's in it for me?" The most effective answer is always what it has done for other farmers in similar situations. Here are the answers on mechanical crop dryers from several farmers who have used L. P. gas-operated systems. Their records also show "What's in it for the LPG dealer."

CORN is one of the last crop drying loads of the year, beginning in late summer and continuing through the fall months and in some areas into the early winter. For the L. P. gas dealer, corn drying is a big load and a good one. For the farmer who has had experience in drying corn with L. P. gas, mechanical drying is the only way.

Traveling across the nation's great corn belt, BUTANE-PROPANE *News* found farmers everywhere singing the praises of mechanical drying in a familiar chorus: ". . . less storage space required . . . reduced field losses . . . increased efficiency of corn pickers . . . corn ready for market sooner gets better prices . . . L. P. gas gives controlled temperature . . . costs are low, savings high."

BUTANE-PROPANE *News* visited with three farmers who use LPG for corn drying to learn their actual experience. Two of them—The Funk Brothers Seed Co. and Warren Moffet—are in Illinois while one— Louis Knipp Sr. —farms in Missouri.

To present the role of the L. P. gas dealer, we interviewed Al Woelfle, president and sales engineer, Illinois Butane Gas Co., who supplies gas for the Funk Brothers' drying operation.

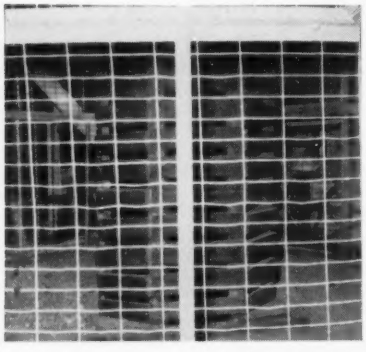
Crop drying is a big factor in the year's operation for Illinois Butane Gas Co., one of the oldest L. P. gas companies in Central Illinois. Much of the firm's business is in the heart of the corn belt.

When using a mechanical dryer, the corn drying season comes earlier than when corn is left stand-

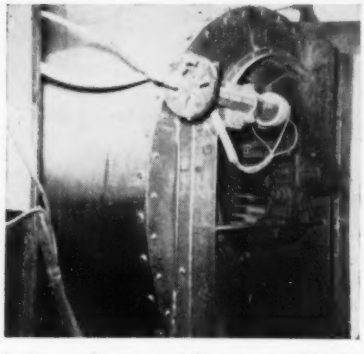
Crop Drying

Illinois Butane Gas Co., near Bloomington, Ill., is in the heart of corn growing country and sells a big part of its annual gas load to farmers with corn dryers.

Growers no longer need to allow corn to dry in field. Harvesting is easier when corn has higher moisture content and less corn is lost. Drying is done with L. P. gas.



Heated air passes up through a duct in the floor while corn is held around the heat chamber by wood slats.

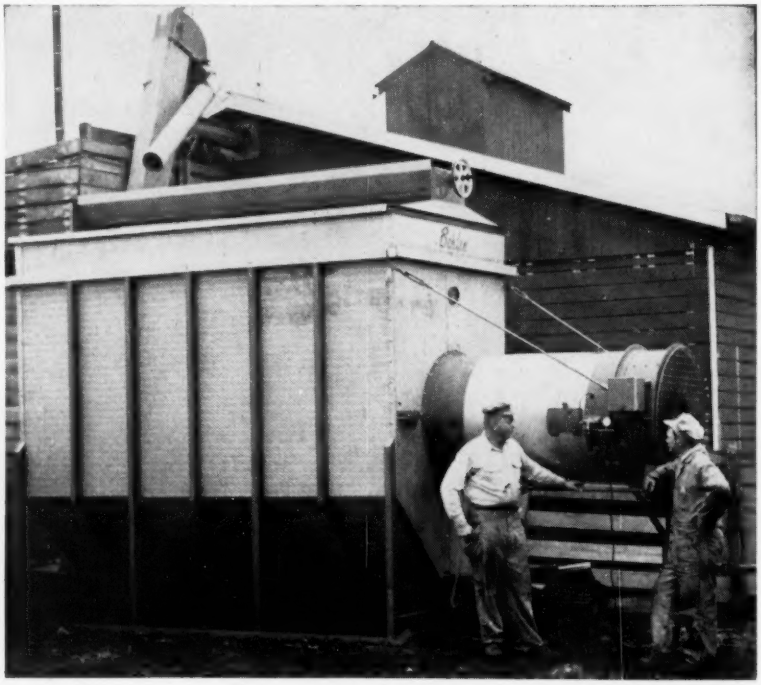


L. P. gas heater and blower assembly for drying corn in converted corn cribs.

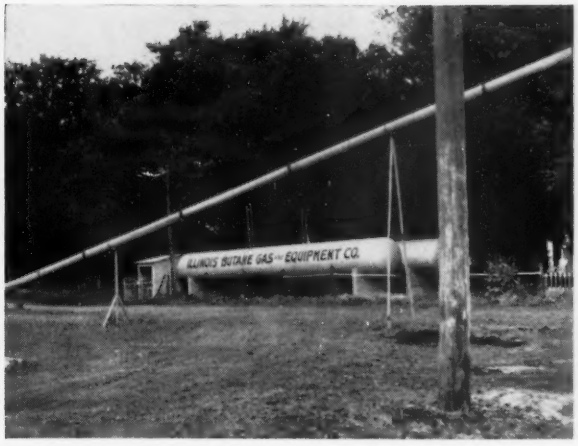
ing in the field to dry naturally. For the L. P. gas dealer in the central Illinois area, the peak corn drying load is from September 15 to October 15. Other crops create an earlier demand for mechanical drying, but in this area corn is king and presents the biggest load.

Illinois Butane Gas Co.'s drying customers range from individual farmers to large commercial seed companies. The L. P. gas firm's customers use all types of drying facilities including complete factory-built drying bins with integral drying equipment, factory-built dryers which have been adapted to existing storage structures, and custom built drying equipment erected on location using existing structure for holding the crop while it is being dried.

Al Woelfle himself designed and built one of the first L. P. gas-fired drying units that his firm supplied with gas.



Artificial drying of corn with L. P. gas reduces field losses, gets corn on market earlier, allows storage of shelled corn which reduces required storage space. These are some of the reasons why corn growers are installing dryers like this one shown in operation near Modesto, Ill.



Illinois Butane Gas Co. keeps two 6000 gal. tanks on property leased from major customer, Funk Brothers Seed Co., near Shirley, Ill. Overhead pipe conveys corn cobs.

Bins and dryers are housed in this building at the Funk Brothers Seed Co. Conveyor on top, left, transports corn from elevator to drying bins.

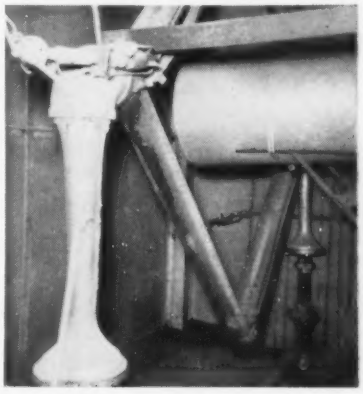
"Crop drying is a perfect load for an L. P. gas dealer to develop," Mr. Woelfle pointed out. "It is a short term load but it's big, and it comes at the right time for us to help balance the summer-winter ratio."

Once the units are operating, crop drying installations have presented no special problems or undesirable features for Illinois Butane.

The Funk Brothers Seed Co. and Funk Trust Farm, near Shirley, Ill., consumed well over 130,000 gal. of Illinois Butane's L. P. gas last year. But then the Funk Brothers have a big corn drying operation. The firm dries an average of 300,000 bushels (bu) of seed corn each season. Considering the length of the season (30 days), the huge size of the drying facilities might be visualized.

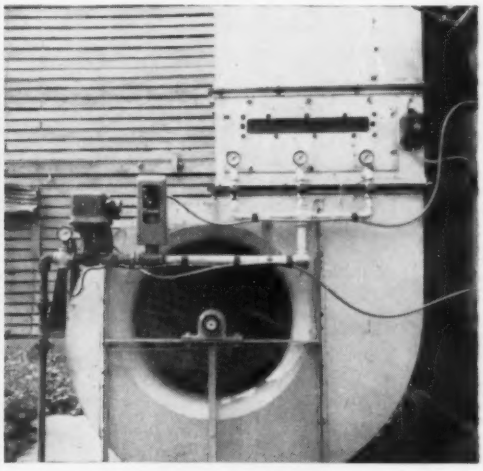
Seed corn at the Funk Brothers plant is dried on the cob, using a carefully planned procedure. The corn is harvested by mechanical pickers and then trucked to a large processing building. The building houses an elevator, drying bins, drying burners and blowers and working space where the corn is graded after removal from the bins.

At the processing building, the



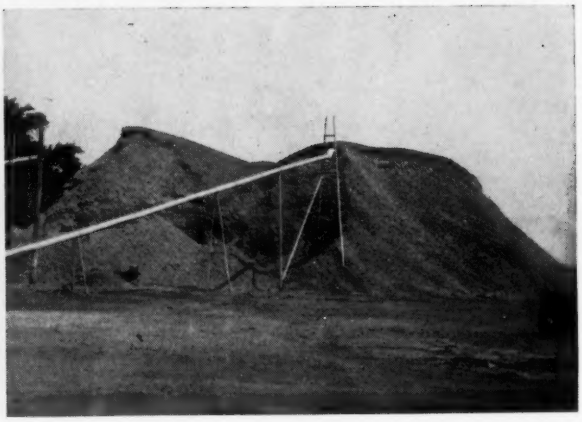
Two king-size Cambell burners stand at each end of the Funk Brothers drying building. Each burner has a capacity of approximately 175,000 Btu. Note electronic safety pilot, top, left.

A shelled corn dryer is used at the Funk Trust Farm to bring corn moisture content down to desired level before storage.



Burner operating pressure of about 12 lb is registered on the three gauges on the burner-blower assembly which serves the shelled corn dryer.

Shelled corn is stored in these bins on the Funk Brothers Shirley, Ill., farm.



Corn cobs, ground by L. P. gas grinder, await shipment as cattle food.

harvested corn is lifted by the elevator to an overhead conveyor belt which runs to 30 drying bins, 15 on each side of the conveyor. The corn is deposited by the conveyor into the bins.

Drying equipment is located at each end of the building. Equipment at one end consists of a 150,000 cfm blower and two burners having a total maximum capacity of 3½ million btu/hr. At the other end of the rows of bins is a 100,000 cfm blower and two burners which have a total maximum capacity of 2½ million btu/hr. The blowers are made by the N. Y. Blower Co. and The Campbell Dryer Co. of Des Moines, Iowa, supplied the burners. Throughout the entire drying process, complete safety is provided by fully automatic controls.

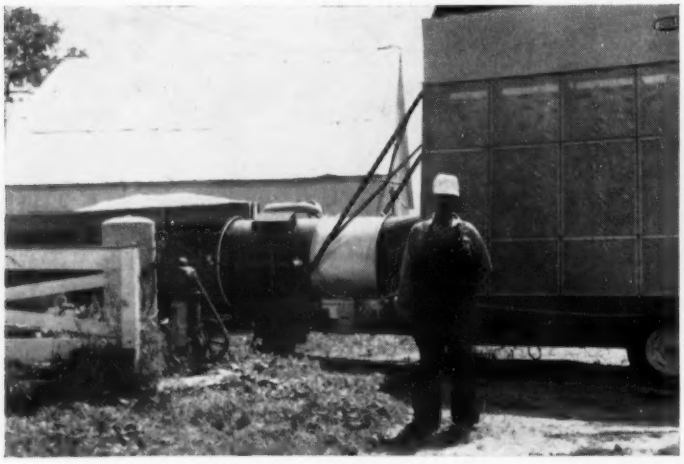
Propane-heated air is blown through the bins by means of ducts underneath the bin floors. The heated air rises through the grain and escapes through exhaust ducts near the ceiling.

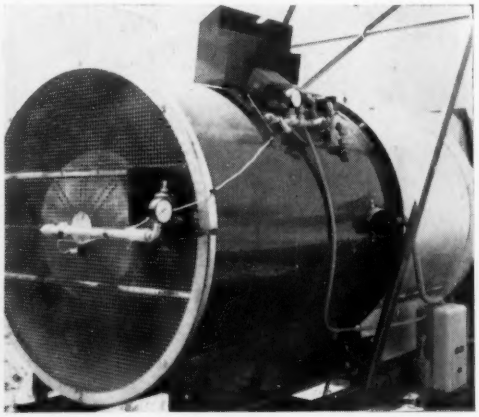
Throttling of the gas input accomplishes perfect air temperature control regardless of the moisture content of the incoming corn. Variations of moisture content of the newly picked corn from 14 per cent to 30 per cent have been encountered. Naturally, a 14 per cent content will require less heat, therefore less fuel, to reduce the moisture to the final 12.5 per cent level desired. In spite of this, the operators prefer to harvest corn with a higher moisture content since field losses for the dry corn are considerable, and more than offset the fuel saving.

"When it comes to seed corn drying, there is nothing like propane," remarked Howard Reeder, Funk Brothers chief engineer, who is enthusiastic over the results produced by the liquefied petroleum gas.

Mr. Reeder should know the difference in fuels, for he has tried them all. His firm originally used a coal-fired steam boiler for seed corn drying and when results were unsatisfactory he tried oil. With oil, carbon and smudge were en-

Louis Knipp Sr., stands in front on his batch bin and dryer on his Tipton, Mo., farm. Last year this two million Btu unit dried more than 1200 bu of shelled corn daily.





A close up of the propane drying unit on the Knipp farm shows latest safety controls. Drier allowed use of picker-sheller and resulted in high corn prices.

countered and the temperature recording chart showed sawtooth fluctuations.

Temperature fluctuations could not be tolerated since ideal drying temperature for seed corn is 110° F and 110° is also the maximum temperature permissible. Experiments have shown that seed corn germination is destroyed by temperature exceeding the 110° limit.

Now that propane is used, the burners require almost no watching and an even 110° is maintained by means of the automatic controls. The circular temperature recording chart shows a line so round it could almost have been made by compasses.

After the corn is dried, it is moved to conveyors by means of augers and goes to the grading area. Inferior ears are discarded to be used for feed. The graded corn is eventually sent to Normal, Ill., for final grading and shelling.

The cobs, with kernels removed, are augered into a pile where they are later run through a propane-powered grinder and used as cattle feed. The addition of certain concentrates and molasses. which is kept flowing freely with a propane torch, makes the cobs both nutritious and appetizing to the cattle.

The Funk Trust Farm located at the site of the seed company uses a shelled corn dryer. This is a feed corn drying installation and the results with propane are equally good. Every possible hazard has been foreseen and made negligible by the use of fully automatic safety controls.

Superior performance, important as it is, is not the only benefit being derived from the use of propane instead of coal or oil at these installations. Fuel cost per bushel of grain dried is less with propane. And a saving in labor cost is had since the close supervision required when using coal or oil is eliminated.

Propane is piped as a vapor to the shelled corn dryer as well as the seed corn dryer. Two 70 gal. Mitchell vaporizers easily handle the vaporization problem.

Even old corn cribs can be used in a drying installation, Illinois Butane reports. This has been done by two local farmers who grow and dry corn for the Corneli Seed Co. The existing structures on both farms have been utilized.

On one farm, the areaway between two corn cribs has been converted into a hot air duct. Canvas curtains are used as the duct walls. The curtains are gradually raised as the corn level in the crib rises. This arrangement permits a maximum amount of heated air to enter the cribs beneath the corn level but prevents the escape of unused air over the top of the corn.

A 1000 gal. tank is furnished to these customers for use during the drying season. A charge of one cent per gallon is added to the fuel cost to cover tank rental.

Since they are big consumers, a different type of storage arrangement is made with the Funk Brothers Seed Co. and Funk Trust Farm. Illinois Butane leases a part of the Funk property and has installed a bulk plant consisting of

two 6000 gal. storage tanks. All gas put into the tanks is purchased by the Funk Brothers Seed Co. on a gallonage basis. A dispensing unit permits records to be kept of all withdrawals. If Illinois Butane is ever faced with a shortage, it can withdraw its needs from this plant through the meter and replace the amount withdrawn with the next filling of the tanks.

Illinois Butane has additional storage of two 18,000 gal. tanks at Barnes, Ill., and one 30,000 gal. tank at Bloomington.

This company's experience has been that an L. P. gas dryer installation can lead to other gas loads. The Funk Trust Farm uses L. P. gas for heating branding irons, the previously mentioned molasses tank and five stock watering tanks. LPG furnishes power for tractors and at the present time, a farmhouse L. P. gas heating conversion is underway.

The 1000 gal. storage tank in foreground supplies propane to the 600 bu Butler batch drying bin in background on right. Trucks are filled with shelled corn dried last October and stored.

Crop Drying

While the Funk Brothers Seed Co. has been utilizing modern mechanical crop drying techniques for some time but turned to L. P. gas to get a better product at lower cost, Louis Knipp Sr., who operates a farm near Tipton, Mo., had never used mechanical drying of any type until recently. Mr. Knipp, who farms 15,000 acres, turned to mechanical drying so that he could use a picker-sheller. A picker-sheller picks and shells the corn in the field and reduces handling, hauling and storage costs. For best results, however, it must be used in conjunction with a crop dryer.

Last year, Mr. Knipp purchased a Butler batch bin and propane crop dryer. This purchase made possible the early harvesting of 27,000 bu of corn using a picker-sheller.

In previous years, before owning the crop dryer, Mr. Knipp had to wait for the corn to dry to a safe moisture content in the field before picking. A moisture content of less than 13 per cent is required for safe storage. A picker-sheller works most efficiently when the corn is at about 25 per cent moisture content. At this content, field loss is reduced considerably. Harvesting early when the moisture content was approximately 25 per cent enabled Mr. Knipp to avoid most of the conditions which cause corn crop losses.

The first shelled corn brought in from the field had a moisture content ranging from 27 to 31 per cent. This is higher than is most desirable for best picker-sheller operations but was necessary so that as the crop dried in the field the majority of it would be at the ideal moisture content when harvested.

The 2 million Btu propane-fired burners of the dryer made it possible to dry this corn in only four hours. Succeeding loads came in at from 24 to 27 per cent and were brought to the safe moisture content in three hours or less. An average of 1200 bu of shelled corn a day was dried and stored. Government tests revealed the stored corn to have a moisture content of 10.25 per cent. This was well under the safe limit and the 27,000 bu were placed under government loan at $1.62 per bu. The local market price was $1.08 per bu.

Farmer Knipp estimated his cost of drying at two cents a bushel. This was more than economical, since the 27,000 bu of corn were sold at an increase in profit of 54 cents per bu. This year he plans earlier harvesting of his other grains, such as wheat and barley, to gain larger yields per acre. Most small grains with high moisture content can be harvested early and stored safely using a bin and dryer of this type.

The success of Mr. Knipp's L. P. gas drying operation has created a market for drying operations on neighboring farms. Custom drying for some of these farms is included in Mr. Knipp's 1956 plans. Propane also heats the Knipps' modern ranch home and is used for tractor fuel.

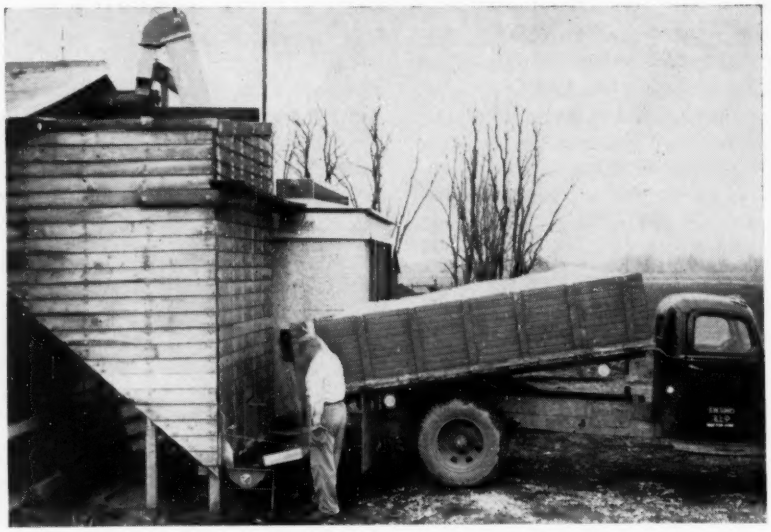
It was lack of storage space that convinced Warren Moffet, Modesto, Ill., farmer, to shift his corn growing operations from field drying to mechanical drying using L. P. gas.

"Any farmer faced with an ear corn storage problem, whether it's because ear corn cribs are in bad shape or because modern methods have made possible larger yields, should forget about building new ear corn storage. He should build shelled corn storage and buy an L. P. gas dryer." This is the advice Mr. Moffet now gives. He and his partners-sons, Jim and Bob, have a reputation in this area of rich farm land for being progressive and successful. This reputation didn't just happen, it was caused by incidents such as the one that happened four years ago.

The Moffet family was faced with a corn storage problem. Their corn crib was too small. It held only 3800 bu of ear corn. The average cost of new storage buildings for ear corn runs from $1 to $1.50 per bu. For shelled corn it averages less than 50 cents per bu. They estimated that $7000 would be a conservative figure for construction of ear corn storage of the necessary capacity.

The difference in storage costs occurs because shelled corn occupies only about one-half the space needed for corn on the ear.

This fact, plus the ease of handling shelled corn as compared to ear corn, convinced the Moffets to



Jim Moffet, Modesto, Ill., farmer, watches corn being dumped into auger which will convey the grain to top of Behlen L. P. gas dryer.

switch to storing the shelled corn.

Their storage facilities consisted of a double crib with a driveway dividing the two crib sections. To convert this to a tight building suitable for grain storage, a concrete floor was laid in the driveway and all walls were lined with masonite. The ends of the structure were then sealed and the resulting enclosure was ready for shelled corn with the proper low moisture content.

The conversion increased storage capacity from 3800 bu of ear corn to 12,000 bu of shelled corn. Cost of the conversion was $1500 as compared to the estimated $7000 price tag for new ear corn storage.

A Behlen L. P. gas-fired dryer and bin plus a picker-sheller were purchased for only slightly more than the saving in storage costs.

"Harvest early, harvest more" is now the Moffet motto. They have found a sharp reduction in field losses resulting from early harvesting when the crop has a higher moisture content. And, Mr. Moffet adds, harvesting in shirt sleeves is more comfortable and more efficient than harvesting in sheepskin coat weather.

Another result of early harvesting is higher efficiency and greater safety in picker operation. Early corn will not clog the pickers as easily as the drier late corn and accidents from farmhands reaching into the picker to unclog it accordingly decline.

During one season, the use of their dryer enabled the Moffets to sell 9000 bu of new corn at old corn prices. This price was 25 cents per bu more than their corn would have brought two weeks later. On top of this, the field losses were cut in half by starting three weeks early.

In 1953, the Moffet corn storage building was filled with propane-dried corn. The low moisture content made possible the placing of this corn under government loan and seal. Drought conditions in 1954 caused a crop failure. The stored corn was still in perfect condition and the government resealed the 1953 crop at about 15 cents a bushel for storage.

The blower on this dryer is also operated on L. P. gas. Note the power take off shaft from the tractor.

Liquid propane is used by the burner of the Behlen dryer owned by the Moffet farm. Extra heavy 3/8 in. copper tubing connects the dryer to the supply line from the tank. The use of excess flow valves which close at four gpm prevents the escape of fuel should the line break. An insignificantly small part of the dryer's heat is used in vaporizing the liquid propane as it enters the vaporizer near the burner. The vapor pressure is controlled by a pressure regulator which permits the vapor to enter the burner torch at the exact pressure desired. A pressure of between 15 and 30 psi is generally used. When the orifice size and air intake are correct, the flame is a clean bluish-yellow.

In the event of blower power failure, the fuel supply is automatically cut off. This is accomplished by a sail vane which rides horizontally in the air stream. If the air stream stops the sail vane will drop, causing a solenoid valve to stop the fuel flow. Excessive air temperature in the dryer's air chamber will cause the high limit safety control to function.

Although crop dryers are manufactured for use with nearly every type of fuel, manufacturers are almost unanimous in recommending use of L. P. gas. The Behlen Manufacturing Co., Columbus, Neb., points out that a fuel pump is not needed in propane units, the need for continuous ignition is eliminated, manual air adjustments for the burner are not necessary and soot and objectionable odors are practically non-existent. That the farmers realize the advantages offered is evidenced by the fact that more than 90 per cent of all farm model grain dryers sold by the Behlen Co. are propane fired.

L. P. gas storage on the Moffet farm is provided by a 1000 gal. bulk tank. Not only is the crop dryer burner fuel taken from this tank, but also the fuel for furnishing blower power. A power shaft from the dryer is connected by a drive shaft to the power take off of a heavy duty propane-powered tractor. This converts the tractor engine revolutions into blower revolutions.

To eliminate the need for detaching the tractor from the power take off for refueling, a liquid line was run from the dryer supply line to the tractor fuel filter. Such a provision is needed because once the drying work begins it continues for days. The average time for actual equipment operation on the

Moffet farm is 10 to 12 hours per day.

Mr. Moffet estimates that one gallon of propane will dry an average of 10 bu from around 27 per cent moisture to 12 to 14 per cent. For wheat and oats, he estimates that it takes only half as much fuel.

Bob and Jim Moffet heat their homes with L. P. gas. A stock tank heater and two tractors are also propane-operated.

In 1955, the Moffet farm propane load was approximately 13,000 gal. A good share of this gallonage was consumed by the crop dryer which was used for both corn and wheat.

Mr. Moffet feels that an important fact for L. P. gas dealers to remember is that mechanical crop drying is becoming a vital part of modern farming. Users of drying equipment must be certain that the fuel supply is uninterrupted once the drying operation begins. Therefore, the farmer must have adequate storage and a dealer who can be depended on to keep the tank supplied. ■

Crop Drying

LPG curing boosts tobaccoland profits

By CARL ABELL

The growth of the L. P. gas market for tobacco curing is farther advanced than is the case with any other crop. But the surface has barely been scratched, even in the areas where it is most widely practiced. The available summer load for tobacco curing is tremendous, and it can be gotten by the aggressive dealer. Here's how.

TOBACCO curing still offers one of the largest potentials for building volume and for load balancing in all of the states where that crop is a major agricultural product. Most of the curing is done in the late summer, when domestic load is lightest, and when the cost of delivering fuel is at its lowest seasonal level. Average dumps for this service are large, which still further lowers delivery costs. From the standpoint of the L. P. gas dealer this is highly desirable business.

Curing his crop with L. P. gas also has numerous advantages for the farmer. Not all of them are financial, although phenomenal extra profits through its use are frequently reported. The combined cost of fuel and labor for the season's curing is almost always lower than with any other fuel. The quality and the market price of the cured crop are generally higher than when curing is done by other methods. Shrinkage during drying is reduced, so the farmer has more pounds to sell at the higher price. Curing is faster than with other fuels. More loads can be put through the barn in a season, so one barn can cure the crop from more acres. The hazard of burning barns is reduced—fire originating from propane heaters in tobacco barns are almost unknown. Temperature control is automatic—the burners require no stoking, cleaning or regulating, so the farmer does not have to lose his sleep or hire a night fireman to keep the barn at the right temperature. He does not have to spend his days working over the burners—his time is free for suckering, picking, other farm work, or just going fishing.

Sale of L. P. gas for tobacco curing is off to a good start, but statistically speaking it has barely started. In North Carolina, where it has probably developed farther than in any other southern state, the *Tarheel LP-Gas News* tells us that between 5000 and 6000 of the state's tobacco barns were equipped with L. P. gas drying at the end of the past season. Between 2000 and 3000 more propane curing systems are expected to be installed there this year. The latest USDA survey shows that 368,000 tobacco barns are in use in North Carolina. Approximately two per cent of the potential tobacco curing gallonage in that state has now been reached.

A survey of fuel consumption in these barns by the North Carolina LPGA indicates the use of 800 gal. per barn per season. Estimating that 7000 barns will be heated with propane during the 1956 season, their fuel consumption for the year would be 5,600,000 gal. With a total consumption for the state of 75,200,000 gal. (latest U. S. Bureau of Mines report) the tobacco barns account for 7½ per cent of the volume. If 30 per cent of the barns

were drying with propane, it would add more than 80 million gallons to the state's annual consumption.

Those would be summer gallons, which could offset the winter unbalance in quite a lot of territory where tremendous amounts of winter heating fuel is needed, and where the possibilities of developing local summer loads are limited. And those figures are only for the state of North Carolina—not the entire tobacco belt.

The principle competitive fuels in the tobacco curing market are oil and coke, although a great many barns are still heated with wood. Each of these fuels has its special disadvantage, and all have one major disadvantage in common. Oil burners require a great deal of attention in order to hold the flames at the correct temperature for the cycle in progress at the moment. They are also subject to clogging, so constant supervision and frequent cleaning are necessary. Coke must be hand-fired, and can not be made to yield a constant temperature. The coke must be carried to the burners, and the ashes cleaned out and removed. All this requires continuous vigilance on the part of the farmer. Curing with wood fires has all the disadvantages of coke, plus a greater variation in temperature, and the fact that someone must cut the wood.

With all of these fuels, it is necessary to waste a great deal of heat. The products of their combustion would contaminate the tobacco and reduce its market value due to deposition of soot and discoloration of the leaves. To get the best grades possible with these methods, it is necessary to heat the barns indirectly, circulating the heated combustion products through a maze of nearly horizontal ascending flues from which heat is transferred to the surrounding air. This air is static except for the circulation due to convection.

The flues used with these systems present other problems in addition to the inefficiency of the heating system. They rust out quickly and require frequent replacement. Burned out flues near the burning fuel are a potent fire hazard, and burning of tobacco barns from this cause is a frequent occurrence. The

High on a Kentucky hill, this tobacco curing barn now uses L. P. gas. Formerly, wind movement alone did the curing, the reason for the barn's original hilltop location.

Blue Grass Butane Co., Lexington, Ky., fills a 500 gal. L. P. gas tank near a tobacco curing shed. Tobacco curing holds the potential of a big L. P. gas market.

flues are in the way when the work of filling and emptying the barns is going on, and they limit the capacity of the barn because of the necessity of hanging the tobacco high enough to keep the leaves off the flues.

In contrast, the L. P. gas curing systems eliminate or reduce all of these disadvantages. The burners are small, and are placed directly on the floor. Curing is done by "direct firing," with the combustion products discharging directly into the drying atmosphere. This is possible because there are no residues or soot produced that will contaminate the product. The action of the burners produces a dynamic movement of air which gives positive circulation through the barn. This permits hanging the leaves closer together and still retaining ample circulation for quicker drying than is possible with the flue curing system. This quicker curing not only increases the throughput of the barn—it also retains more of the valuable tars, gums and nicotines, giving greater weight to the cured leaves and providing a higher grade tobacco which brings more per pound. An additional gain in barn capacity is generally made by hanging an additional tier of leaves in the lower area which is not required for the flues.

With the curing systems most widely used in the various wrapper leaf and bright leaf districts, and to some extent in the burley areas, the burners are covered by wire guards which effectively prevent fires from starting even though tobacco leaves may drop directly over the burners. And with the flues eliminated, the time required to fill the barn with fresh leaves and to remove them after curing is materially reduced.

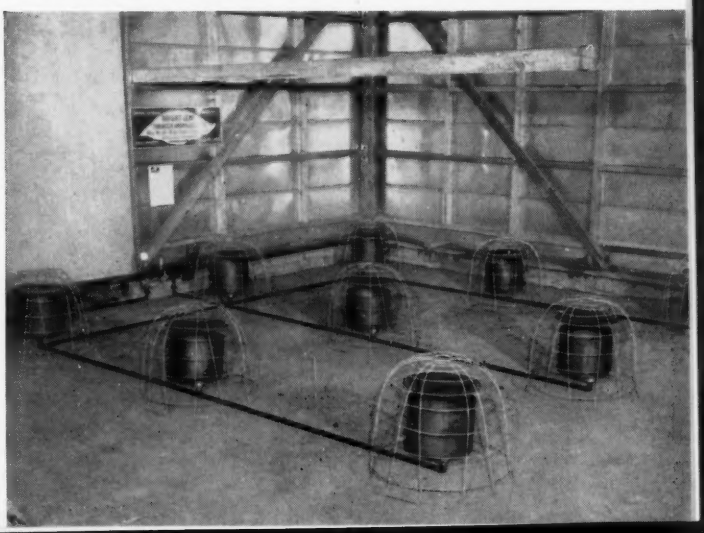
The faster curing of the crop with the L. P. gas systems in the wrapper leaf and bright leaf areas is also a matter of considerable importance. The saving of from one to two days in curing time enables the growers to run an extra batch through the barn during the curing season. This permits one barn to serve more acres. With automatic thermostatic control, the ideal temperatures for the various steps of the curing are maintained constantly, reducing labor, providing a better color, and as previously stated, imparting the qualities that bring higher prices at the auctions.

The wrapper leaf and bright leaf tobaccos are cured entirely by means of controlled heat. They require a great deal of fuel during the harvesting season. In the burley tobacco areas, the leaves are not picked as they ripen, because the lower value of the crop does not justify that amount of labor. Instead, the entire plants are cut off just above the ground, and suspended from poles in the barns. Curing is ordinarily done by circulation of air through the barn. In dry weather this is satisfactory, but the weather in the burley area is seldom ideal for drying at that season of the year. If the curing is too slow, the crop may be damaged by various troubles that arise from retained moisture. Some sort of auxiliary heat is needed as insurance against crop loss or downgrading resulting from humid weather. There is a growing tendency to use propane burners for this auxiliary heat. The fuel consumption per ton of crop is less than in the areas where the higher priced tobaccos are grown, and it varies considerably from season to season, but there appears to be a growing tendency to use heat in less inclement weather to secure the advantages of superior quality and a slightly higher price.

Throughout the tobacco growing areas, the use of LPG curing systems is increasing. To some dealers, it may seem heartbreakingly slow. But there are dealers whose tobacco curing business is developing like a wave. This is typical of the marketing of any new development in the agricultural field. Several years will almost always be required between the time a new and improved practice is developed and proved, and the time that it is widely accepted and used by the farmers that it can benefit. This lag cannot be eliminated, but it can be shortened by energetic selling. The tobacco curing market is on the verge of great development. Don't give up the ship. ■

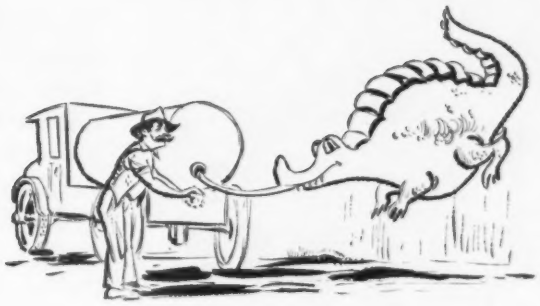
Burley tobacco barns like this one, where curing takes place over a long period, use Kur-More burners.

Gastobac burners are widely used for bright leaf and wrapper leaf tobacco curing. A single automatic control unit operates all of the burners in one barn.



PROPANE PETE • Episode No. 12

Propane Pete tussles with an alligator



By J. ARTHUR THOMPSON

ONCE upon a time, Propane Pete heard some folks singin' "Way Down Upon the Suwanee River" and it sets up a whole passel of ideas in his head. He figures as how he'd better go down that way and see it for himself.

He ambles down through Georgia and Florida with Old Beepee, his propane tank truck. It was an uncommonly wet spring and the rivers were high. He didn't have any map, but just rambled around on whatever road happened to look interestin'. He was drivin' along a back road when it started to rain.

It wasn't any common rain either. The drops were as big as three gallon buckets and they was comin' down so thick you couldn't see between 'em. When Pete felt some wooden planks under the wheels of the truck he stopped.

The rain slacked up just a trifle and Pete seen he had stopped on a little bitty old bridge across a creek that in most times a man could spit over. But not now! It was way out of its banks and risin' fast.

Pete looks up stream just in time to see a 7-ft wall of water bearin' down on him. He grabs hold of Beepee just as the water hit the bridge. It just lifted that bridge floor straight up an takes it with the truck and Pete on down stream. It was a rough ride but Pete and the truck managed to stay on the bridge until they come to a great big river. It was runnin' way over its banks too.

By a little riskin' and a lot of luck, Propane Pete manages to steer that there bridge floor over to the shore and snags onto what had been a big bridge pier, but the bridge was gone. Havin' a little rope handy, he ties up and figgers he'd better sit out the rain.

He hasn't been there more'n a few minutes when he sees a feller swimmin' down stream like crazy. Right behind this feller and swimmin' just as hard comes a big alligator. That 'gator was plumb hungry and he'd made up his mind that he was goin' to have himself a bait of man-meat.

When the swimmer passes Pete he looks up and yells for help. Pete ain't much on swimmin' but he never lets another guy down if he can help it. So when the 'gator comes up even, he dives at him and lands square on his back. That alligator is right distracted and madder than a she bear with a sore tail. He tries to grab Pete but can't reach far enough.

Pete hangs on and gouges the 'gator's eyes with his thumbs. They tussels and fights for quite a spell then Pete finally wrestles him up on the bank. He drags him along to where old Beepee is moored by the bridge pier, figgerin' he'll have him some 'gator skin shoes.

But when he gits him out there on the pier, he ain't got any more rope. Meantime the young feller that was bein' chased has got ashore and he come up to give Pete a hand. Pete is all outa breath and motions for the feller to hand him the propane hose. The feller does but the alligator grabs the end and swallers it before Pete can git hold of it.

Propane Pete jumps quick and turns on the valve and that there 'gator started to swell up like a poisoned pup. The young chap just stands there fascinated and absentmindedly hauls out a soggy cigarette. Pete, not thinkin', strikes a light for him. The escapin' gas takes fire and that alligator blows up like a bomb. He blows clear outa his hide and the hide is cut into strips.

The young feller thanks Pete for savin' him from the alligator and introduces himself as Mel Trotter. He allows as how he is about the brokest human there is. Pete denies this, being fresh out of anything resembling coin of the realm himself.

Well, Mel Trotter and Propane Pete gits their heads together and they rigs up a paddle wheel which they fixes onto the end of that there bridge floor that old Beepee is sittin' on. Then usin' the alligator hide for a belt, they hitches the hind wheels of Beepee up to the paddle wheel and starts up a ferry business haulin' folks and supplies across the big river. Did right well too.

Mel Trotter eventually winds up in South Carolina runnin' an L.P. gas outfit and Propane Pete heads back for the west. He never did know whether he'd seen the Suwanee River or not. ■

The Federal Trade Commission is a powerful and important governmental body. It protects the public from unfair business and protects the businessman from unfair competitors. FTC general counsel Earl W. Kintner recently outlined the functions and current activities of the Commission for the summer meeting of the American Home Laundry Manufacturer's Association and this is a slight condensation of that report. Included are FTC activities in the field of deceptive practices, antimonopoly and antitrust action and activity on behalf of small business.

Everyone is affected by FTC

By EARL W. KINTNER, General Counsel • Federal Trade Commission

IT is my understanding that there are some few who have never heard of the Federal Trade Commission and that some others have heard of it but consider the Commission to be just one more of an excess of bureaucratic agencies of the Federal government which regulate—and which regulate unnecessarily, slowly and expensively. The latter category, I fear, may be preoccupied with thoughts of what the Commission may do to them.

In discussing recent trends in trade regulations, I hope to explain the necessary work which the FTC is doing and can do for all of you as businessmen and as consumers and how the Commission is accomplishing this work speedily and with a bare minimum of expense.

Operations of the FTC may roughly be divided into two major categories: (1) those designed to eliminate deceptive business practices and (2) those designed to stamp out monopolistic and anti-competitive practices such as price fixing, price discrimination and exclusive dealing.

Unlike agencies with particularized authority such as the Interstate Commerce Commission and Federal Communications Commission, the jurisdiction of the FTC extends to a great variety of commercial activities and deals with matters common to many industries.

The functions of the FTC are governed by the statutes assigned to it by the Congress for administration. These include the Federal Trade Commission Act of 1914 as amended by the Wheeler-Lea Act of 1938 and by the Oleomargerine Act of 1950; the Clayton Act of 1914 as amended by the Robinson-Patman Act of 1936 and the Anti-Merger Act of 1950; the Webb-Pomerene Export Trade Act of 1918; the Wool Products Labeling Act of 1939; Public Law 15 of 1945 relating to the regulation of the business of insurance; the Lanham Trademark Act of 1946; the Fur Products Labeling Act of 1951; and the Flammable Fabrics Act of 1953. All of these laws are designed to protect the American public from unfair and unscrupulous methods of competition, to prevent practices which lessen competition and cre-

Earl W. Kintner

ate monopoly and at the same time to promote proper competitive conduct.

Deceptive practices

First and principally I should like to discuss some of the recent trends in our deceptive practice work. The most recent development in that field is a concerted effort by the Commission to stamp out "bait" advertising. Essentially, bait advertising is the practice of offering at a spectacularly low price a product or a service the seller is determined not to sell if he possibly can avoid it. His purpose is to establish direct contact with people who want or need the product or the service, then sell superior products at regular or much higher prices. He will go to great lengths to avoid selling the "bait," always disparaging it, sometimes sabotaging it, and on occasion even flatly refusing to sell it.

The better business bureaus of the Nation, the Federal Communications Commission and the FTC are engaged in an all-out fight to eliminate hucksterism and "bait" advertising. Scarcely a day goes by that the Commission does not take action against some new form of deceptive "bait" promotion. Whether the subject be a vacuum cleaner, sewing machine or a storm window, the alleged "bargain" is usually found to be no more than a trap, guilefully baited to sell a much more expensive product.

There is no hard and fast line where bait advertising leaves off and the advertising of genuine bargains begins. If the particular facts clearly reveal that the "bargain" can be purchased, if at all, only over the determined efforts of the merchant to disparage the product, to delay its sale and to urge the advantages of other higher priced products, then the advertisement begins to smell strongly like bait. On the other hand, special sales during which spectacular bargains are offered as "eye-catchers" are considered proper inasmuch as the public is fully aware of their purpose—and the element of deception is happily absent.

While no single warning sign on bait advertising is evidence that it exists, the Commission has warned that the following facts should alert the public:

1. A product priced at a startlingly lower price than that charged for the same kind of product at other stores.
2. Reluctance on the part of salesmen to show the advertised product.
3. Disparagement of the advertised product and insistence by salesmen on showing more expensive types.
4. Explanations that the advertised product on hand is only a floor sample ("nailed to the floor") and that long delay will be encountered in getting others like it.
5. A sell-out of the "bargain" in a suspiciously short time, "but let me show you something else even better."

Bait advertising is a practice as unfair to the legitimate merchant who sees potential customers attracted by the false bargains, as it is highly irritating to the would-be customer. Advertising is vitally important to every manufacturer. It enables him to tell the public about scientific and other important features, including price. Bait advertising tends to destroy public confidence in all advertising. It must be stamped out, and the Commission is doing everything within its power to accomplish this.

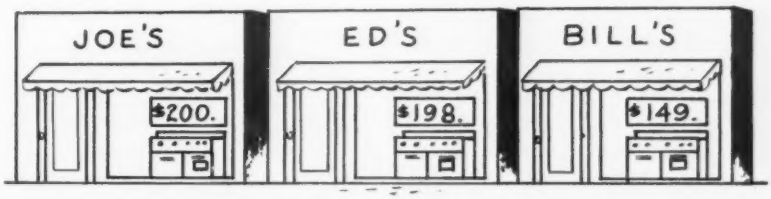
The second major trend in deceptive practices work is the adoption of an industry-wide approach to false advertising wherever possible.

The Commission has long sensed the need for a comprehensive plan of attack on such practices, and to the extent possible recent efforts have been channeled toward the ultimate goal of eliminating deceptive practices on an industry-wide basis. The reasonableness of this approach is self-evident. It is manifestly unfair that Commission action should be undertaken solely against one or two members of an industry simply because complaints have been addressed to the Commission regarding such members while other members of the same industry engaged in the same deceptive practices are permitted to go scot-free. The new industry-wide approach is accomplished by a combination of the Commission's compulsory and voluntary procedures. The compulsory method consists of carefully selected Commission complaints addressed to the most flagrant offenders. The voluntary methods consist usually of the Commission's stipulation procedure and its trade practice rules procedure.

Recent examples of application of the combination of compulsory and voluntary procedures are seen in the cigarette industry, the cosmetics industry, the pillow industry, and the television manufacturing industry.

Business mergers

Turning now to our antimonopoly work, the most recent trend is the development of a program aimed at preventing business mergers which substantially lessen competition or tend to monopoly. The so-called Anti-Merger Law has been on the books since 1914, but has never been effectively enforced. Prior to 1950, enforcement efforts had failed by reason of court decisions which had enabled wholesale evasion of the Act by means of the so-called "assets loophole." This permitted merging corporations to evade the application of the Act by purchases of assets rather than stock or by purchase of stock and speedy conversion into asset control. This loophole was remedied in 1950. During the past



A product listed at a startlingly lower price than that charged for the same kind of product at other stores may be a sign of "bait" promotion.

year, the merger enforcement programs of the Department of Justice and the FTC have resulted in more than a dozen complaints and several of these have been concluded by the entry of consent judgments.

At the same time, numerous bills providing more effective merger controls have been introduced in the Congress. One of these, which has been given favorable consideration in the House, extends Section 7 of the Clayton Act to asset acquisitions by banks while another requires merging corporations to report to the Government details of pending mergers which may be significant from the antitrust standpoint. The latter bill also confers upon the FTC authority to seek injunctive action to prevent mergers prior to their occurrence. In some mergers an acquired corporation may be completely eliminated as a competitive entity. Thus in some cases, the Commission may be in the position of attempting to lock the door after the horse not only has been stolen but also may be dead.

The Commission's merger work has also been seriously handicapped by reason of lack of working funds, and Congress, during the present session, has indicated that this defect will be remedied. Many people tend to think of Government agencies as monsters constantly increasing in size, such increases taking place methodically or by leaps and bounds. It may surprise you to know that in 1918 the FTC had 689 employees and that at this time our total staff consists of 607. Our total operating budget for the present fiscal year has been slightly more than $4 million, or approximately the cost of a single new jet-propelled commercial airliner. While I must confess to some bias on the subject, I think this is a rather small price to pay for the work accomplished by the Commission.

To return to the subject of mergers, I hasten to make clear that the Commission, even though its merger program may be "beefed" up by more money and improved legislation, does not contemplate headlong condemnation of all mergers. This would be administrative irresponsibility and legal folly to boot. Like a myriad of other competitive practices subject to the antitrust laws, business mergers acquire character, good or bad, in a given market context. Mergers can only be judged in law according to statutory standards of competitive injury. Injury can be judged only on a case-by-case basis. Some of the problems involved are definitions of relevant markets, determinations of size and market share of the merging corporations and their industry competitors, and analysis of industry-wide competitive patterns.

The so-called "assets loophole" in the 1914 Anti-Merger Law was plugged up in 1950.

Program for small business

Another continuing development in the trade regulation field is a program of increasing activity in behalf of small business. The legitimate requirements of a sound policy for the promotion of the competitive health of small business are found in the statement of President Eisenhower in his State of the Union Message of January 1956. These are:

1. Access to adequate financing;
2. Participation in Government procurement programs;
3. Keeping open the door of opportunity;
4. Checking monopoly;
5. Preserving a competitive environment; and
6. Competent counsel on problems.

Access to adequate financing and participation in Government procurement programs do not fall within the jurisdiction of the Commission. They are the primary concern of the Small Business Administration created pursuant to the Small Business Act of 1953 and Government purchasing organizations.

The fact that more new businesses were incorporated in 1955 than in any previous year in the Nation's history does suggest that the door of opportunity is open to the small corporation. That small businesses are participating in Government procurement programs is evidenced by recent studies which show that in the first two quarters of the present fiscal year small business has been awarded 97.2 million dollars out of a possible total of 208.5 million dollars in contracts by the Atomic Energy Commission and that a similar ratio prevails with respect to contracts awarded by the Army.

The next three points fall squarely within the ambit of the Federal Trade Commission. Keeping open the door of opportunity, checking monopoly, and preserving a competitive environment require constant vigilance in the enforcement of Section 5 of the Federal Trade Commission Act, the Robinson-Patman Act, and the Anti-Merger Act.

The last point, that of competent counsel, involves a relatively new activity of the FTC. In order to insure competent counsel on business problems, the Commission, in 1954, established a completely new bureau, the Bureau of Consultation, and within that Bureau there was established a special Small Business Division. The purpose of these developments was to insure the availability of advice and guidance from the Government's point of view. The field offices of the Commission are another source of information; and for those who may be in Washington, I might add that my office door is always open.

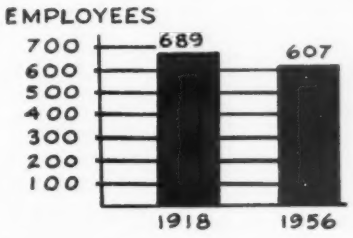
These developments are part of a significant trend in trade regulation, a trend toward advising business as to the methods by which compliance with the law may be achieved.

Antitrust actions

I have saved what I consider the most significant trend in trade regulation until last. Hidden within this trend is a fact which I believe you will find to be most interesting. The trend of which I speak is a very positive movement toward a more realistic and at the same time a more energetic enforcement of our antitrust laws. No single criterion describes this trend. It is not alone that both the Department of Justice and the FTC are conducting more investigations and instituting more complaints, although that factor is indeed significant. The increase in antitrust enforcement at the Commission is striking. During a ten-year period ending in 1953, the average number of antimonopoly complaints was 28. In 1954, the number rose to 30. In 1955, the number of antimonopoly complaints issued had reached 36, but in fiscal 1956 to date, with more than a month to go, the total antimonopoly complaints are already 41. I should not be greatly surprised if this number does not near 50 prior to the close of the year, which would almost double the previous 10-year average.

In the course of analyzing trends to describe, I took a very close look at the 41 complaints in the present fiscal year, and I noted more than the usual number of Robinson-Patman Act complaints, more than the usual number of exclusive-dealing complaints, the usual number of price-fixing complaints, and, as I mentioned before, special attention to the anti-merger problem. During the past year, the number of merger complaints was seven. Compare this to a grand total of three during the first four full years after the amendment of the Anti-Merger Act in 1950.

But these figures, although striking, did not amaze me. The truly amazing thing which struck me as I glanced at a listing of the complaints filed in fiscal 1956 was that only two of the 41 complaints were addressed to trade associations. Two is only five per cent of the total of 41. Recalling that back in my days as a Federal Trade Commission trial lawyer, trade association cases were looked upon as the "bread and butter" of antimonopoly enforcement, I checked back to test the accuracy of my recollections. My look backward was to the year 1946, or exactly 10 years ago. The record there showed five association cases of an antimonopoly complaint production of



The number of persons employed by the Federal Trade Commission this year is less than the number in 1918.

19, or 26 per cent of the total. What is the significance of this marked change? A number of possible conclusions present themselves.

It could be argued that the Commission is no longer interested in suing trade associations. However, I caution you not to put any faith in such a belief, for the fact of the matter is that we Commission lawyers love trade association cases for a number of reasons. The first is that there is a great amount of personal satisfaction in helping to put a wayward trade association on the right track. Another is that it gives Commission lawyers a chance to test their mettle against some of the most capable members of the antitrust bar. The Commission records will show that our investigation and prosecution staffs are just as active now as they ever were in enforcing laws applicable to trade associations.

We must look further. Another possibility is that trade associations have learned how to break the law without getting caught. I cannot accept this conclusion. As has been stated before, we are living in an age of six carbon copies. If illegal activity is taking place, sooner or later one of the carbons is going to turn up. Price-fixing schemes have a way of falling of their own weight. And if they don't fall, they usually at least trip themselves sufficiently to "spill the beans."

Again we must look further, and I hope that my third suggested reason is the correct one. Could it not be that most trade associations have seen the light, and have succeeded in confining their activities to legitimate objectives while avoiding the anticompetitive pitfalls which ensnared so many of their predecessors?

From the standpoint of the Association; the very best advice I could give would be found in the Supreme Court decision in the *Sugar Institute* case, 297 U S 553, where the Court stated:

> "Voluntary action to end abuses and to foster fair competitive opportunities in the public interest may be more effective than legal processes."

If an Association is following this line of thought, it is participating in another modern trend, a trend toward self-policing. This trend may have been inspired by awareness of the earlier trend described above toward renewed vigorous enforcement of the antitrust laws, or it may have been inspired by an innate desire of some other origin. Inspiration is not important. The important thing is the trend itself.

Voluntary compliance with ethical advertising standards and with our antitrust laws should be encouraged by all industries in order to preserve competition and, equally important, to preserve public confidence in competition and in the very excellent products resulting from such competition. ■

Mergers can only be judged on a case-by-case basis since they are judged in law according to statutory standards of competitive injury.

Rx for getting enthusiastic customers:

CertiMatic*

These are the patient's symptoms...

The dealer sold on price alone. His customer's single cylinder system is empty at a critical time . . . and a refill may be many hours away.

The manual outfit may provide a "reserve," but that can be cold comfort to this fellow who has to go outside at night to close the "empty" and open the "reserve."

Pity poor Polly who ran out of gas. The trip outside to switch over the manual system will be a frustrating interruption to her leisurely shower.

And here's the corrective treatment...

This dealer knows that a successful LP-Gas business is based on quality and *service*. He's pointing out the advantages of a *fully automatic* LP-Gas cylinder system.

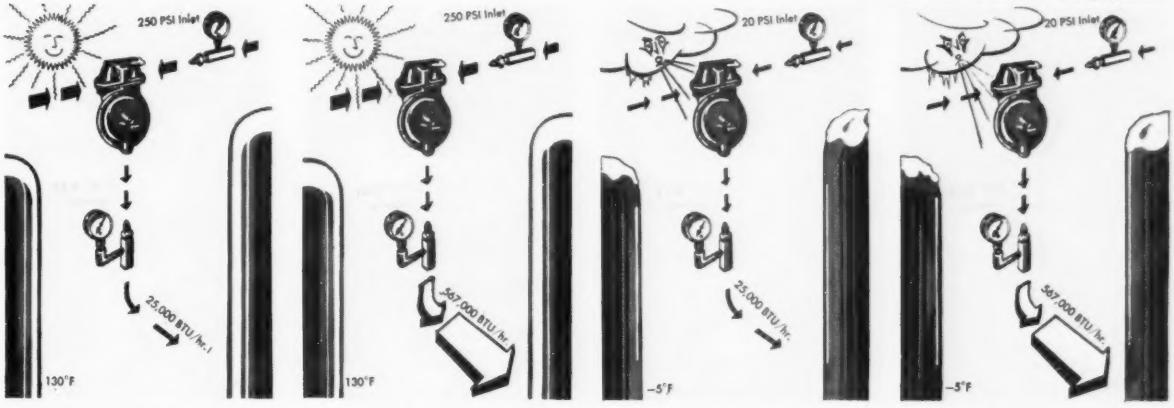
He features the freedom from interrupted gas service . . . explains how the Automatic Throwover switches from "service" to "reserve" cylinder automatically, without user attention.

He shows how the optional Service and Reserve Indicator, when mounted outside the kitchen window, shows when operation is on "reserve" cylinder – permits ordering in time to prevent interruption of service.

by REGO®

for the most in fully automatic performance... summer or winter...with light or heavy loads...prescribe the CERTIMATIC

57455S Outfit (with pigtails)



The CERTIMATIC delivers a constant pressure to a light load in the heat of a desert sun.

CERTIMATIC continues to deliver a constant pressure when the load is heavy.

In the dead of winter . . . when inlet pressure is low...CERTIMATIC handles a light load with ease.

Even under the *worst* conditions of *heavy* winter load . . . CERTIMATIC performs at same high capacity and constant delivery pressure.

You'll *keep* your customers enthusiastic when you prescribe the RegO CERTIMATIC. And for the best, under any conditions, always *insist* on RegO LP-Gas Equipment.

First . . . Foremost . . . Finest

*RegO and CERTIMATIC are trade marks of The Bastian-Blessing Company

The BASTIAN-BLESSING Company

4205 West Peterson Avenue
Chicago 30, Illinois

MEMBER

...hard to control

When emergencies arise it's good to know that your supplier has the situation well in hand — summer shipments are no problem — on-time winter deliveries are the ones hard to control. Contract customers of the Sid Richardson Gasoline Co. always receive their deliveries on time winter or summer.

Because of our independence from company-owned or controlled wholesale or retail outlets we are in position to help our customers. Why buy from your competitor? We offer you a contract assuring year-around delivery of top-quality product at a competitive price. Why gamble when you can obtain proven performance at no extra cost.

Let us tell you about our new type of delivery agreement and how we protect your interests.

Sid Richardson
GASOLINE CO.

629 FORT WORTH CLUB BUILDING • FORT WORTH, TEXAS

REGIONAL REPRESENTATIVES

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5123 NO. NEW JERSEY	3310 SYCAMORE	885 ST. PAUL AVE.	3105 DEWEY	1027 WEST LOCUST ST.
INDIANAPOLIS, INDIANA	MIDLAND, TEXAS	ST. PAUL, MINNESOTA	OMAHA, NEBRASKA	DAVENPORT, IOWA

BPN exclusive

Many dealers attempt to simulate the kitchen or utility room of a model home on their crowded showroom floors in order to show the prospect more nearly how L. P. gas appliances would fit into their homes. A Davenport, Iowa, dealer has gone a step farther. He is using an actual farmhouse occupied by an actual family for a most dramatic presentation while keeping his own showroom clear for action.

The Raymond Keppy family home outside of Eldridge, Iowa, has been made into an L. P. gas dream home to promote sales for Davenport, Iowa's, Propane Gas Co.

The ultimate in showrooms

SHOWING potential customers every type of L. P. gas appliance from a range to a central cooling system in use under actual operating conditions might pose quite a problem to some L. P. gas dealers but Propane Gas Co., Davenport, Iowa, and its president, Edgar H. Holden, have found the solution. As a result, the Raymond Keppy family home outside of Eldridge, Iowa, is probably that state's most well-equipped farmhouse and Propane Gas Co. has one of the best dealer promotion programs to come along in some time.

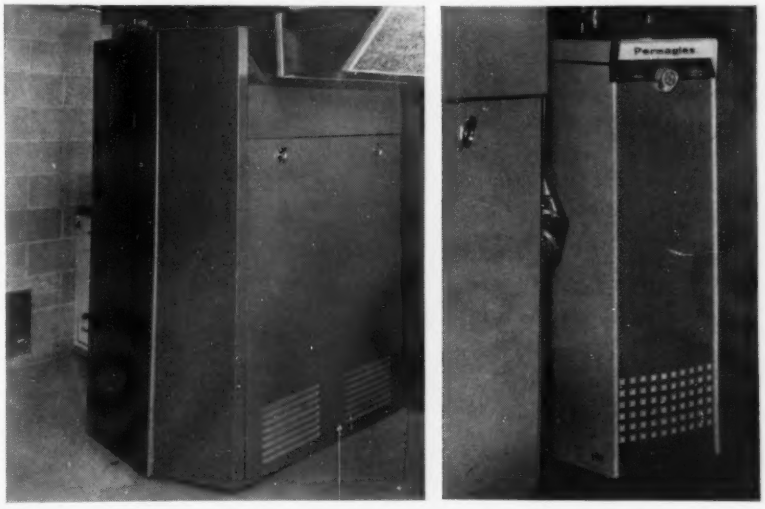
When the Keppy family — four school-age daughters and their parents — began to plan for their new home, Propane Gas decided that the proposed farmhouse would be ideal for use as an L. P. gas model home. The family was approached with the idea of exchanging all of their old appliances for the most-modern gas models and of buying several additional appliances. The transaction was handled at the lowest possible cost to the Keppys.

The Davenport gas dealership worked closely with the farm family in planning for the L. P. gas appliances and installed all of them except the all-year gas air conditioning unit which was handled in cooperation with the heating contractor.

Recently completed, the house boasts of an all-year air conditioning system featuring gas-heated and gas-cooled air, a gas water heater, a gas range and built-in wall oven, a gas refrigerator, a gas home laundry with washer and dryer and a gas incinerator.

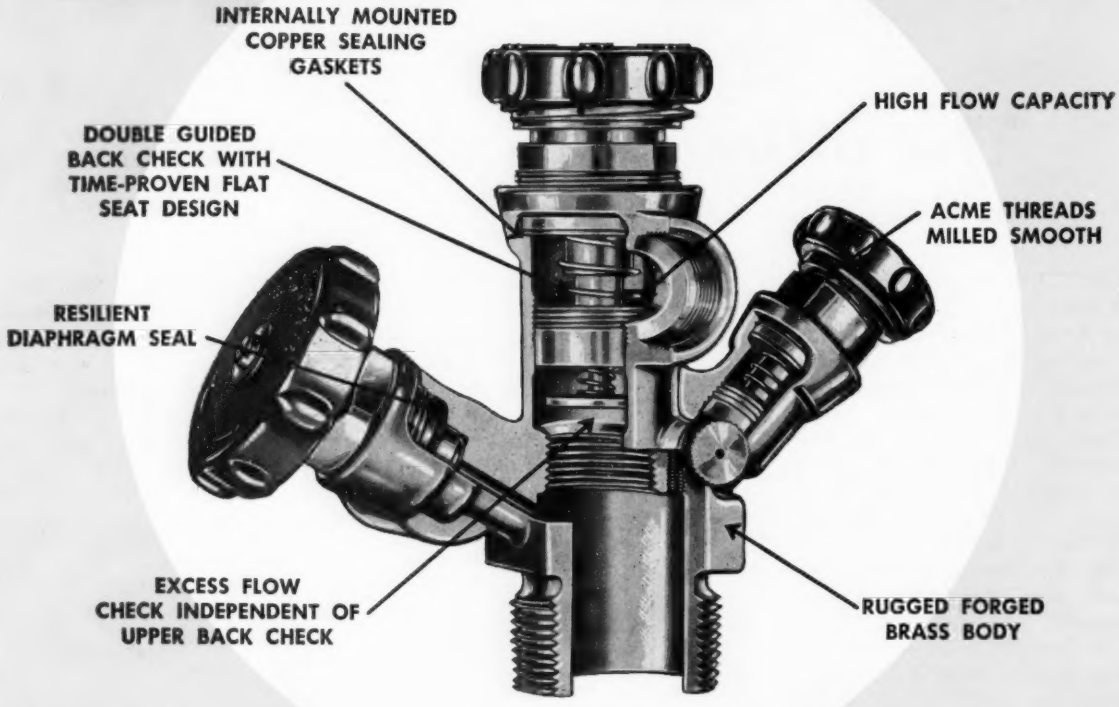
Propane Gas Co. President Holden believes this to be the only rural home in Iowa with gas cooling.

The home was introduced to the



A Servel All-Year air conditioning unit (left) makes the Keppy home the only rural home in Iowa cooled and heated by L. P. gas. Every gallon of L. P. gas used in the Permaglas hot water heater (right) heats 73 gal. of water for the family which is using an average of 4000 gal. of hot water each month.

Why the FISHER® COMBOVALVE is best for your system


INTERNALLY MOUNTED COPPER SEALING GASKETS
HIGH FLOW CAPACITY
DOUBLE GUIDED BACK CHECK WITH TIME-PROVEN FLAT SEAT DESIGN
ACME THREADS MILLED SMOOTH
RESILIENT DIAPHRAGM SEAL
EXCESS FLOW CHECK INDEPENDENT OF UPPER BACK CHECK
RUGGED FORGED BRASS BODY

DEMAND THE FISHER COMBOVALVE ON YOUR NEXT SHIPMENT OF ASME TANK SYSTEMS

FISHER GOVERNOR COMPANY

MARSHALLTOWN, IOWA • WOODSTOCK, ONTARIO

EASTERN OFFICE: 212 New Dickson Bldg., Westport, Conn.

LEADS THE INDUSTRY IN RESEARCH FOR BETTER GAS PRESSURE CONTROL

FISHER Since 1880

Garbage disposal is accomplished by L. P. gas in this Caloric incinerator.

Fully automatic gas washer and dryer will make housework easier for Mrs. Keppy.

entire area in an open house held June 24 from 2 to 5 p.m. and sponsored by the gas dealership. In promoting the event, the Keppy home was called a "dream house" in that it had so many appliances for comfort and convenience, all made possible by L. P. gas.

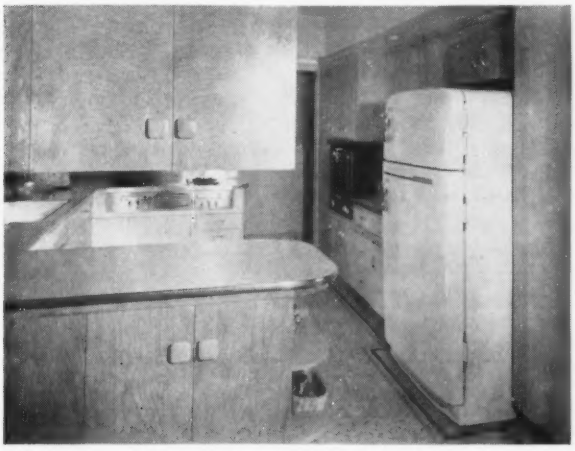
The model home will provide Propane Gas Co. with another advantage in addition to having a working display for gas appliances. A separate meter has been installed on each appliance using American Meter Co. equipment to provide a year-long record of actual operating costs for every gas use in the home. At this time next year, the dealership will be able to provide exact figures on the cost of operating modern L. P. gas appliances for an average farm family.

Included in the meter arrangement is a water meter installed in the hot water line to determine the exact amount of hot water the family is using. This is expected to prove especially important since figures to date show the family is using amounts of hot water in the automatic dishwasher and laundry which are above the average figures quoted by the electric industry.

The family used 4200 gal. of hot water the first month and 3800 the second month. Each gallon of L. P. gas used in the water heater is heating 73 gal. of water.

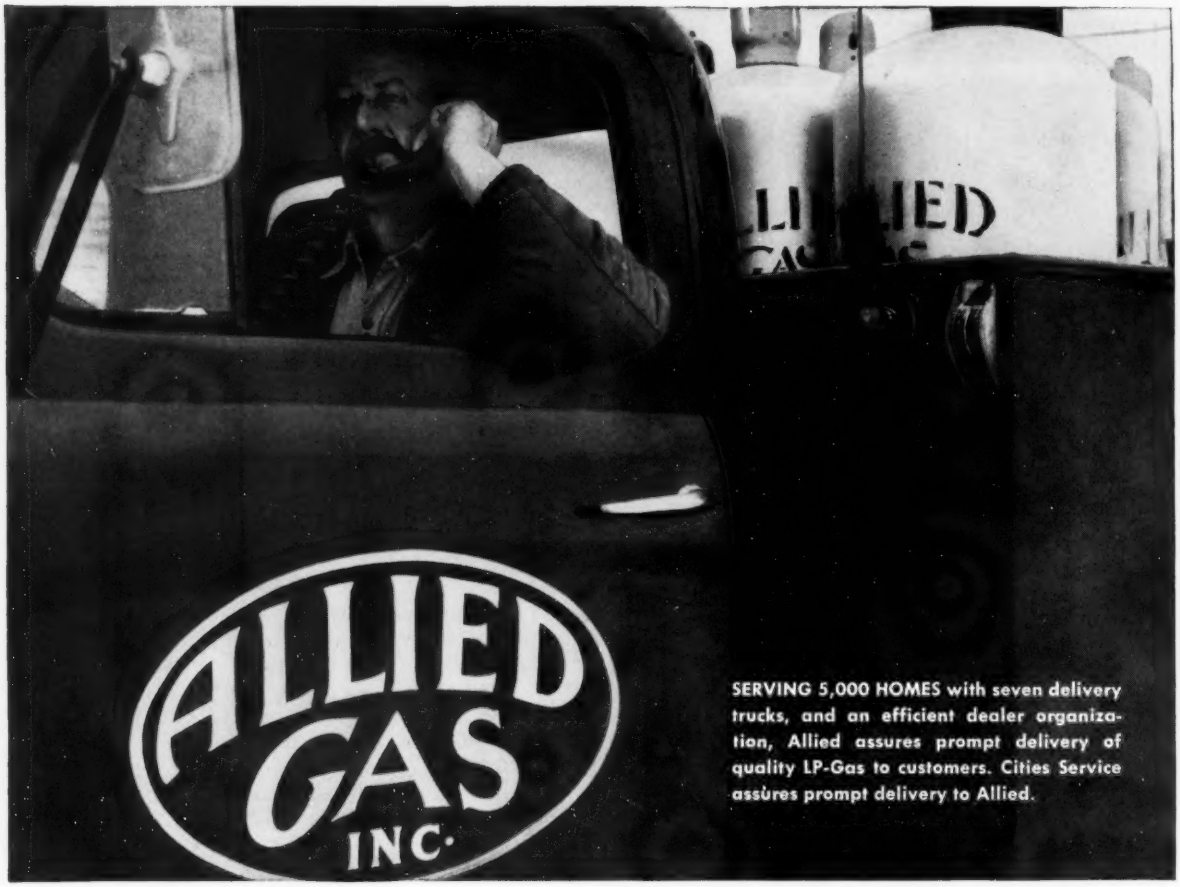
The Keppy family owns and farms 300 acres. They are hog raisers and feed out — purchase and fatten — a large number of cattle each year. Mr. Keppy is a director of a local rural bank and is active in Farm Bureau work. His wife, Jeanette, is also active in Farm Bureau and community work. Both are under 45 years of age. The four girls range from 7 to 11 years of age and are interested in 4-H work.

The open house and other promotional activities built around the model installation provides an unusual means of drawing potential customers while displaying appliances at their very best, in use by a satisfied family in the community — an unbeatable combination. ■



Servel refrigerator is shown in foreground with Chambers built-in wall oven on its left.

Chambers built-in range provides automatic ignition, fast, even cooking and smokeless broiling.



SERVING 5,000 HOMES with seven delivery trucks, and an efficient dealer organization, Allied assures prompt delivery of quality LP-Gas to customers. Cities Service assures prompt delivery to Allied.

Says Allied Gas:

"Superior quality... dependable supply of Cities Service LP-Gas helps assure sales success."

When Allied Gas, Inc., of St. Louis Park, Minnesota, orders a tank car of Cities Service Propane, they expect and get the finest LP-Gas on the market. And they get it right away! For top-quality product and dependable supply, put Cities Service at the top of the list of better suppliers.

And that's just the reason why Allied became an exclusive Cities Service Distributor. It has enabled them to assure a dependable supply of quality LP-Gas to their 5,000 home-customers, regardless of season.

Of course, like most LPG distributors, Allied has striven to balance seasonal sales... and they've succeeded. But, unlike many other distributors who also have succeeded, Allied has not diversified its outlets, but concentrated them. Virtually all their sales are for year-round home uses; water heating, cooking, and refrigeration. They sell no propane for home heating.

"Volume is high in all seasons with this method of sales," reports Allied. "But, naturally, it couldn't be successful without the superior quality LP-Gas and unusually dependable delivery of Cities Service. Any distributor searching for a better supplier would do well to check Cities Service."

For information concerning a dependable supply of quality products, call or write the nearest Cities Service office listed below.

SERVICE!... Part of our name, part of our business

CITIES SERVICE

QUALITY PETROLEUM PRODUCTS

406 W. 34th Street
Kansas City, Missouri

500 Robert Street
St. Paul, Minnesota

20 N. Wacker Drive
Chicago, Illinois

6611 Euclid Avenue
Cleveland, Ohio

Going to the fair

County, regional and state fairs allow the L. P. gas dealer to transport his showroom to the fair grounds where thousands of rural visitors will walk through it in the span of a few days. Here are some tips on how to make them stop, look, listen, leave their names, and eventually buy.

By A. D. BURROUGHS

FROM now until early October, the music from the carousel, the shouts from the ferris wheel, the sing-song of the pitch man and the joyful voices of millions of rural families combine to signal the presence of one of the best methods for tapping the fertile domestic and agricultural market to come the L. P. gas dealer's way all year long —the county, regional and state fair.

Just as families all across the nation are making plans to attend their fairs, the dealer interested in aggressive salesmanship is likewise making ready to go to the fair, to take his sales message to this vast group of potential customers.

The fair provides a means of reaching several thousand prospects for gas, domestic appliances and agricultural equipment in the span of a few days. Reaching the same number and type of people would take a considerably longer period were the dealer to wait for them to walk into his showroom or be visited by his salesmen.

Participation in the fair serves a three-fold purpose: getting every rural family in the area to know about L. P. gas in general and your dealership in particular, getting a long list of active leads for follow up calls and for addition to the mailing list, and making sales on the spot.

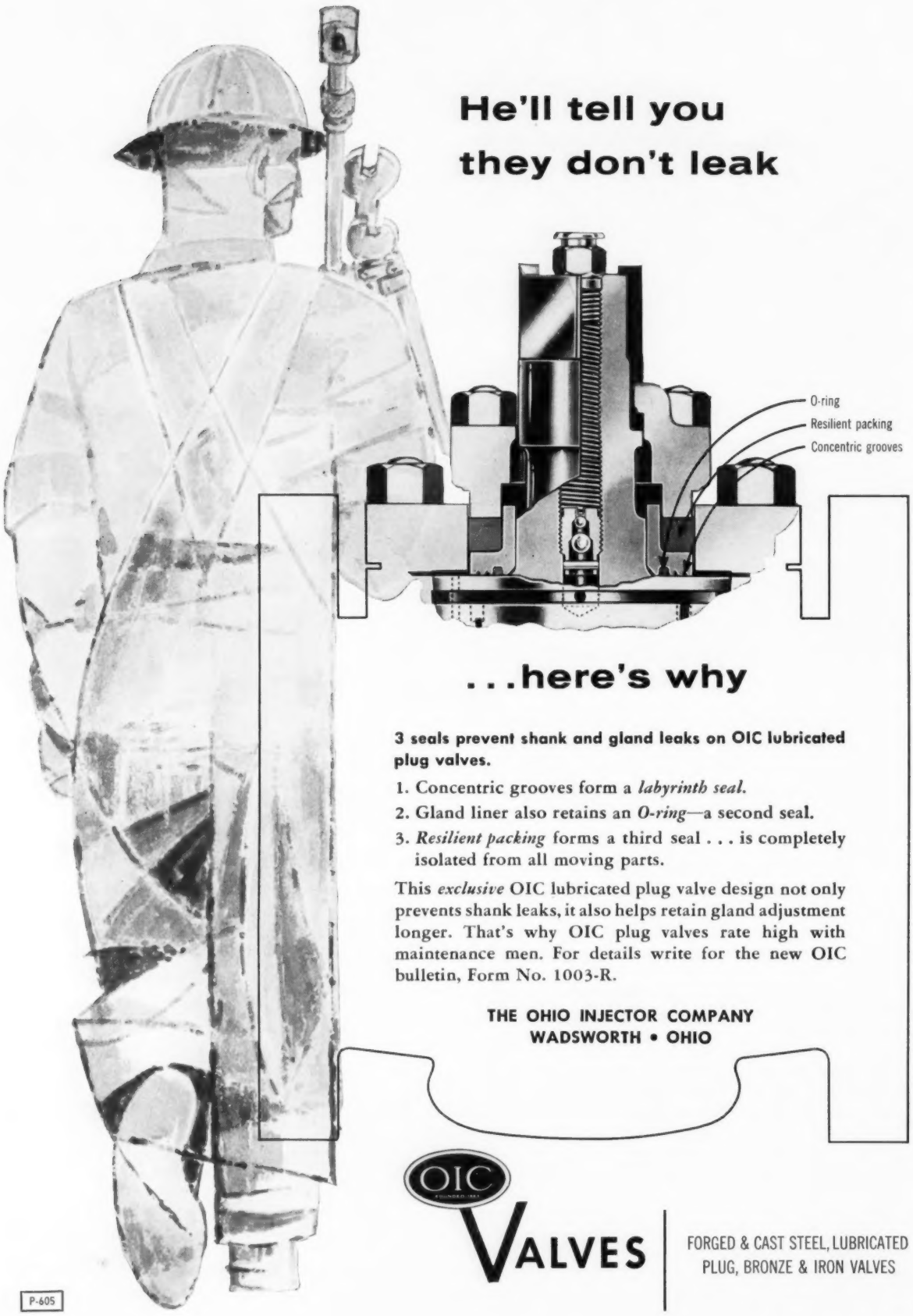
Fortunately, the selling effectiveness of the fair exhibit is not in ratio with the cash cost of the exhibit itself. Whether it is an exhibit prepared by a professional display company, or a simple, neat, well-planned display arranged on planks covered with grass matting under a tent roof, it can be a paying display if the objectives are clear and if certain experience-pointers are followed.

The objectives of the fair exhibit by the L. P. gas dealer are to meet as many people personally as possible, to stop the fair-goers and bring them into the exhibit with a motivation for stopping, to show and demonstrate the services and appliances, to provide a take-home sales reminder, and to get an active list of local rural family names for the important followup sales calls and direct mailing lists to harvest a sales crop from this fair exhibit for months to come.

Like all other sales tools, the fair exhibit will be a more successful one when based on the fundamental pointers proven in past years by other successful fair exhibitors. These pointers, listed below, can act as a check-list for any L. P. gas dealer's exhibit to increase its selling effectiveness.

The dealer-exhibit should:

He'll tell you they don't leak



. . . here's why

3 seals prevent shank and gland leaks on OIC lubricated plug valves.

1. Concentric grooves form a *labyrinth seal.*
2. Gland liner also retains an *O-ring*—a second seal.
3. *Resilient packing* forms a third seal . . . is completely isolated from all moving parts.

This *exclusive* OIC lubricated plug valve design not only prevents shank leaks, it also helps retain gland adjustment longer. That's why OIC plug valves rate high with maintenance men. For details write for the new OIC bulletin, Form No. 1003-R.

THE OHIO INJECTOR COMPANY
WADSWORTH • OHIO

OIC VALVES

FORGED & CAST STEEL, LUBRICATED PLUG, BRONZE & IRON VALVES

P-605

1) Ride on a central selling theme. Often, the dealer's own regular slogan will be sufficient. Other times, a new slogan or theme to tie up the entire display into a logical sales presentation is needed, whether it be to stress L. P. gas in the kitchen with "The Complete So-and-So Gas Kitchen" or a more general one such as "More Farm Profits with So-and-So Gas" or a more specific one such as "L. P. Gas Means More Profit From Poultry."

A common mistake is selling too many items and services, instead of spotlighting one service, sidelining with the other appliances and services. Home heating itself can make a near-complete exhibit with the other services and appliances displayed as "trailer" or sideline exhibit items.

2) Motion, color, and sound—in that order—will stop the fair-goers to look and listen to your display. Demonstrations are vital. Actually cooking, demonstrating the clothes dryer or having a brooder with chicks on hand for a complete sales demonstration — all with a little showmanship, such as aprons, hats, etc.—will put your products in profitable proof action.

Color can often be added with balloons, streamers, and much of the excellent assortment of manufacturer's material now available. Other low-cost display accessories, from display companies, can add a professional appearance to the exhibit. Color can be a part of the exhibit, displaying the appliances in color instead of the traditional white.

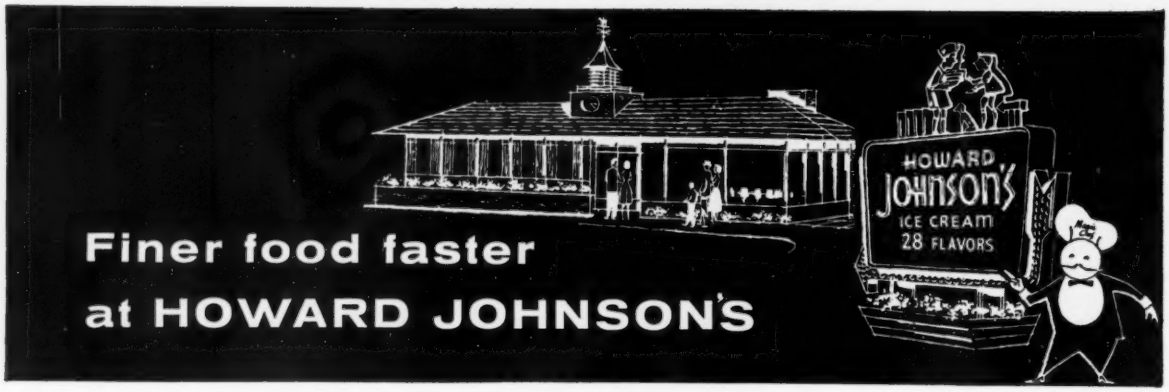
Sound, usually provided with a record player and/or a sound speaker system, can be used successfully. A favorite with long-time dealer exhibitors, as a method for stopping the passer-buyers, is using a movie projector with sales films, injecting a comic cat-and-mouse type cartoon between sales films to stop the public. The same system, using color films and color slides, particularly with slides of local personalities, is effective, too.

The Pyrofax Gas Service exhibit at the Florida State Fair was small, simple, but attractive. Just add a cooking demonstration and two salesmen, then stand back for action.

Northwestern Blaugas Co. has a building of its own at the Minnesota State Fair, mails free model kitchen booklets to all who leave name and address.

3) Free gifts to everyone who stops, whether it be books of matches, balloons with your name imprinted, suckers, potholders, pencils, pens, or the popular cotton gloves or kid's baseball caps carrying your name and slogan, will increase the display attendance.

Make some arrangement to get the name and address of every



and wherever food is famous . . . with

Magic Chef

DURABLE . . . its formed steel construction gives maximum strength, longer wear, more dependable performance. *Plus* . . . gleaming stainless steel trim, now *at no extra cost.*
Call your cooking equipment dealer or write Magic Chef, Inc., Commercial Division, 3201 Harvard Avenue, Cleveland 5, Ohio.

Wherever quality food is served in quantity, fine chefs count on Magic Chef. For performance, economy, and profitable operation from cooking to clean-up, the new Magic Chef Cafe Line is today's most modern equipment for smaller commercial kitchens. *NEW* . . . in features and sturdy construction. *THRIFTY* . . . it saves fuel and cleaning time.

Save Time, Save Costs
with the
MAGIC CHEF
Deep Fat Fryer
Smooth rounded open-vat tank for easier cleaning. Stainless steel drain panel with hi-lo basket racks for "keep-warm" draining. Efficient full 65,000 BTU Burner–faster recovery. Heavy insulation for cooler kitchens. Magic-Lite Automatic Ignition at no extra cost.
For Heavier Cooking Needs Specify Magic Chef
Super Duty Commercial Gas Cooking Equipment

visitor to your exhibit. Registration books, or a drawing awarding some major appliance at the end of the fair, are successful methods.

Getting these names for your mailing list for prompt follow-up sales calls can be the real pay-off for your exhibit, so make all efforts to get this objective accomplished.

Many other methods of motivating the passerby to stop, look, and listen at the fair exhibit have been successful, too, such as one Kentucky dealer whose "drawing gift" to each person stopping at the display was a free photo, taken with his Polaroid camera. While the pictures were developed (takes 60 seconds), the fair-goer had a good exposure to the display. He kept a list on hand, getting the names and addresses of all receiving this gift.

An Illinois dealer reported making his exhibit a sort of a "headquarters" for the fairground by the use of a large bulletin board (used for recording the farm show events, for lost and found, along with personal messages), plus some number of comfortable chairs to give folks a chance to sit down, relax, and catch their second wind.

4) Have plenty of sales promotional literature on hand, and see that everyone passing by, or stopping in, gets the recipe booklets or the illustrated catalogs on the various equipment and appliances. This provides the take-home benefits for definite sales recollection and impression after the fair.

Most dealers stress being at the exhibit in person during the fair, just being there, being friendly, meeting and greeting new and old friends, to make and keep friends and to add customers to their lists.

Several dealers prepare a mobile display, usually using a tractor-wagon bed as a foundation, to make one effort serve for two or three county fairs in their area.

These steps, cut and tailored for the needs of individual dealers and the needs of individual areas, will help make a mere exhibit into a paying display.

Participation in other fair events such as providing the cash or trophy awards for the various 4-H entries in baking or farming, or awarding a blanket for a horse race, all reinforce publicity and selling efforts.

Participation in fairs helps the dealer to meet more of the potential customers in his area. It helps these prospects to know him, his services and his products and what they can mean to them. This, and the resulting word-of-mouth advertising which follows, all lead to more sales. ■

Lone Star Gas Co. goes to the fair

By JULIA HUNTER • Lone Star Gas Co.

☆

Actual exhibiting experience is the best help in planning future fair displays. Here, a home service advisor with a large L. P. and utility gas firm tells about her company's experiences at the nation's largest state fair. Although Lone Star Gas does things in a big way, even the smallest exhibitors can pick up some tried and true ideas.

☆

MY company, Lone Star Gas Co., Dallas, maintains an entire building at the Texas State Fair and receives over 250,000 visitors during the fair's 16-day run. The fact that we maintain a building to use only 16 out of 365 days well illustrates, I believe, the importance of the fair. We do have one use of the building 24 hours a day, 365 days a year. Atop the tower which fronts the building, is a large, constantly burning, neon blue flame with the word GAS under it. The flame can be seen for distances

BPN field report

Here are the features your next delivery unit should have..

AND ONLY AMERICAN GIVES THEM TO YOU

A Custom Unit at Lowest Cost

New super-safe plumbing system increases pumping capacity . . . makes delivery faster . . . saves time and money.

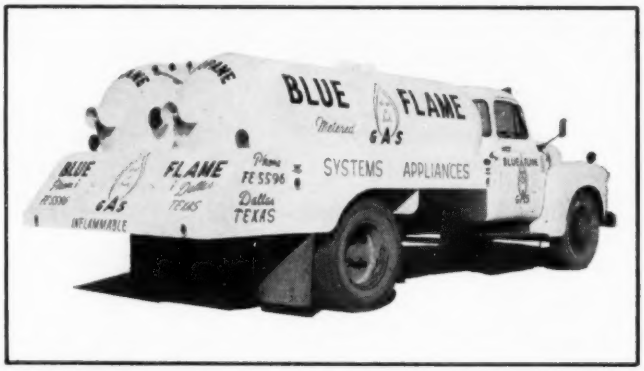
Tanks are locked to truck. Positively won't slip forward . . . a great driver-protection feature in case of accident.

Best balanced units on the road. American delivery units save wear and tear on trucks, give greater safety.

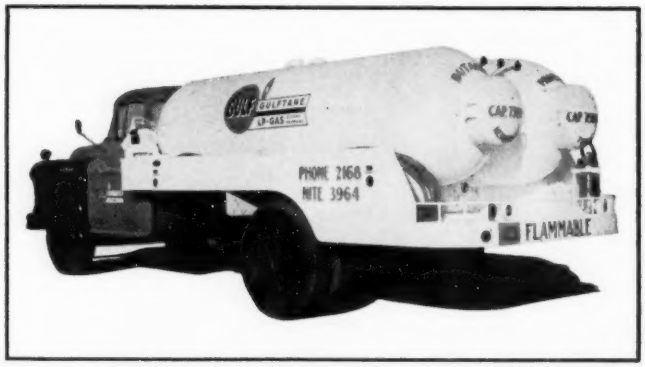
Motor fuel tank and meter mounted in rear . . . can't be side-swiped or sheared off . . . another American safety feature.

Quick changeover . . . when your long lasting American tanks are ready for a new truck, they can be changed over in just a few minutes . . . another American plus.

Good Looks . . . American delivery units are streamlined and good-looking . . . give you the extra safety you need with the smart appearance you want.



Deluxe Model N17. A completely enclosed, compact unit designed with all controls, motor fuel tank, meter, hose reel, power take-off and clutch controls in rear cabinet. Particularly desirable for dealers in northern areas . . . keeps all controls and equipment clean, fully protected from snow, ice or rain.



Deluxe Model B21. Fuel tank and fire extinguisher located in rear . . . meter and hose on catwalk next to driver. Also available with fuel tank, clutch, power take-off and hose reel in rear.

FINANCING AVAILABLE — *Write for Information*

HEADQUARTERS FOR THE LP GAS DEALER
1 order • 1 shipment • 1 invoice

Telephone STerling 4916

American Tank
AND MANUFACTURING COMPANY INC.

2136 WEST COMMERCE STREET • BOX 5525 • DALLAS 22, TEXAS

A state association or a group of dealers can combine forces for a full-scale exhibit like this one at the Colorado State Fair.

around and from any side angle.

Inside the building the exhibit is different each year and includes all kinds of gas equipment. Several years ago we reproduced three kitchens currently appearing in leading women's magazines. These met with such success that following years we repeated this procedure with three new, current magazine kitchens.

This year we made a change. One of the leading magazines cooperated with us to plan the entire exhibit. From various issues, kitchens were reproduced, equipment articles were blown up and featured, decorating ideas were shown and as a special attraction, one space was devoted to blow-ups and displays from a perfume article that appeared in the magazine while the Fair was in progress. That particular space was a real drawing card. From it, all women who visited the building were given a booklet about perfume and a tube containing seven perfume samples. An attendant in the space discussed types of perfume with them and sprayed them with one and sometimes more, of the fragrances on display.

Now, you are probably wondering how in the world a perfume article could tie-in with the gas business. We were searching for something that would ordinarily seem completely removed from our business and something that had glamour and appeal for women when this idea dawned. We feel our business needs more glamour. Perfume is glamourous, women like it and we did make a tie-in. The label is in blue with blue flames in the borders. The label reads, "Compliments of Lone Star Gas Co.—Samples of seven basic types of perfumes . . . one just right for you . . . and . . . There's a gas range to suit you, too!" The last words are in large type.

We gave away 30,000 of these and could have used many more. The perfume give-away and display were a complete success. All over the grounds we would hear one person comment to another, "Oh, you've been to the gas building. I can smell that good perfume." We used the perfume as a drawing card and to get ourselves talked about. It did just that.

For two years, a giant recipe box was the feature attraction in our State Fair building. The box was a replica of a regular card-file recipe box decorated in provincial designs and housed a home economist with desk, typewriter and recipe files. At the box visitors requested any recipe they desired. Some wanted standard recipes, some wanted those for very unusual dishes.

In the two years, among thousands of requests, we were asked for everything from a recipe for biscuits to instructions for roasting a whole pig. Of the thousands, cakes, cookies and pies were asked for more than any other food. Many recipes were available in printed form in the box, others were typed for the visitor while she waited or they were mailed to her. A special sheet of recipes for standard products was prepared for distribution there and was very popular.

As well as filling recipe requests while on duty in the recipe box, the

Here's Your Profit Combination!

When you deal with Sinclair, you're setting the dials for bigger profit opportunities. For instance, every tank-load of Sinclair LP-Gas is guarded by the five famous Sinclair extras — INTEGRITY, REPUTATION, QUALITY, PERFORMANCE and GOOD SERVICE — to protect and build *your* business reputation. For you, this combination opens the door to increasing sales and profits, with a growing list of satisfied repeat customers.

Get the facts on this top quality LP-Gas with high heating value — moisture and impurities removed — then, make the switch to Sinclair.

MEMBER LPGA

MEMBER national LP-GAS PROMOTIONAL program

Sinclair Oil and Gas Company
Liquefied Petroleum Gas Sales Department
Sinclair Oil Building, Tulsa, Oklahoma

SINCLAIR
A Great Name in Oil

home service girls did a little baby sitting, took care of rabbits and ducks won on the midway, rendered first-aid, delivered messages for one person who was to meet another there and so on. You know how that goes.

Each year at the Fair our exhibit includes a large display of gas ranges and of everything we have shown, this display is most popular. We show approximately 30 ranges. Visitors are free to look them over, take them apart, put them back together (if possible), try the timers, open the doors and drawers—really look at them. They love it!

You can imagine the condition of the ranges after 16 days and nights of that along with junior's standing on the doors and little Mary's crawling into the storage space, but it is worth it. All during the year we talk with purchasers of new gas ranges who made their selection of a particular brand or their decision to buy a gas range because of the range display in our exhibit at the Fair.

One reason for the popularity of the display we have learned, is the absence of direct selling while the visitor looks over the equipment. This is practiced throughout the building. The building is staffed by company personnel from sales, home service, dealer and advertising departments. They explain the equipment, discuss its features, its availability and the advantages of our fuel, but do not make actual sales.

Obviously, sales prospects are secured from the Fair, but not in great numbers, for we never want visitors discouraged by the fear they will have a salesman work them over if they come in to see the exhibit.

Any wonder that fairs across the nation attract such large crowds? This "exhibit" is at the Los Angeles County Fair.

We believe live demonstration of the appliances shown is essential. This does not necessarily mean cooking, for we limit cooking to small fairs, but the appliances should be connected if at all possible and the space should have a sales and/or home service person on duty at all times. A display without personnel and with dead equipment neither draws nor impresses visitors.

Some companies feel a give-away souvenir item at fairs is worthwhile, others do not. We are among the latter, for with the exception of the perfume which was a special promotion, we have derived no benefits from souvenir items used at fairs.

All companies, with whom I have talked, feel give-away literature is important and we agree. It's just human nature to like to fill up a shopping bag with "stuff" when you go to the fair. Literature fills it, some will be read, some will be thrown away, but literature thrown away is not so expensive as a souvenir item thrown away or used with complete unawareness of from where it came.

Experience with fairs has taught us one thing that was surprising to us. They provide excellent training for new sales and home service personnel. Visitors ask every possible question about gas and gas equipment. Those on duty experience meeting many people and all kinds of people and talking with them. As they answer or secure answers to questions they learn more and more about gas appliances. These new people should of course, work with experienced people to give assistance as needed.

It is important too, to staff an exhibit with people of pleasing personality. Working in a fair exhibit, you can talk with as few or as many people as you choose. Most visitors wait for a start of conversation, but a lead is all that is needed to get a discussion well underway with a chance to tell the gas story. Never make an opening remark and hundreds of people pass by with no comment and little observance.

Fare for Fairs can be as interesting or as uninteresting as you make it. Granted, there is little that is brand new in exhibiting, but a new twist, a new slant, a new word applied to exhibits makes them new and interesting and makes them sell. Enthusiasm is contagious. Fare for Fairs enthusiastically planned, set up and presented is sure to be enthusiastically received. ■

W. G. Petty & Son, Memphis L. P. gas dealer, has an employee profit-sharing plan which has resulted in big business for the Tennessee firm. Above, (1) Mrs. Marjorie Acree, longtime employee, contacts W. G. Petty Sr., with information she has uncovered regarding a prospect. Mr. Petty (2) receives the call on his automobile telephone and sells prospect an L. P. gas installation (3) resulting in the 40th sale in six months and a share in the profit for all employees (4). That's how . . .

Petty & Son keep 'em happy

To assure success in business, a firm must keep its employees happy. And that is just what W. G. Petty & Son, suburban Memphis, Tenn., L.P. gas dealer has done with its profit-sharing arrangement.

This thriving firm sells many new installations a year, thanks in considerable part to all of the employees. And because appliances are sold in abundance, those same employees of the company, owned by W. G. Petty Sr., and his son, W. G. Petty Jr., benefit.

That is where the profit-sharing deal comes in, according to the senior partner in the business, a pioneer in the liquefied petroleum field in the south since 1934.

"We have always recognized the value of our employees," said the elder Mr. Petty. "If they are

BPN field report

NEW BEAIRD CHALLENGER

LP-GAS FILLING STATION

HIGH IN CAPACITY... *Low in Cost*

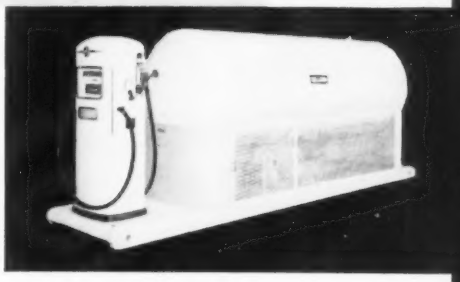
Specification Highlights

- 1,000-wg.-capacity storage tank
- 18-gallon-per-minute dispensing
- Corken Model 12 pump — 1½-h.p., explosion-proof motor (single phase)
- Texoil service station type dispenser
- Code Built — Meets N.B.F.U. pamphlet No. 58 specifications
- Optional expanded metal guard enclosing piping and motor available at small extra cost.

NOW... for a small investment you can capture a profitable share of the LP-Gas motor fuel market. The New Challenger model lets you start right away with a quality-built, full-sized LP-Gas filling station and at a price you have been looking for. Completely packaged with 1,000-wg. tank, dispenser, pump, and every valve and fitting you need, the unit is delivered to you ready-to-go-to-work. There are no extras to buy . . . you start selling LP-Gas motor fuel as soon as you connect the unit to your power line.

Built to code specifications, the Beaird Challenger is simply and ruggedly constructed. When installed in a highway service station its gleaming white enamel finish and attractive streamlined appearance helps you build new LP-Gas motor fuel business.

Write for Catalog



BEAIRD DELUXE LP-GAS FILLING STATION *for installations that require the finest on today's market.*

BEAIRD

THE J. B. BEAIRD COMPANY, INC.

Shreveport, Louisiana Clinton, Iowa Stockton, California

LP-Gas

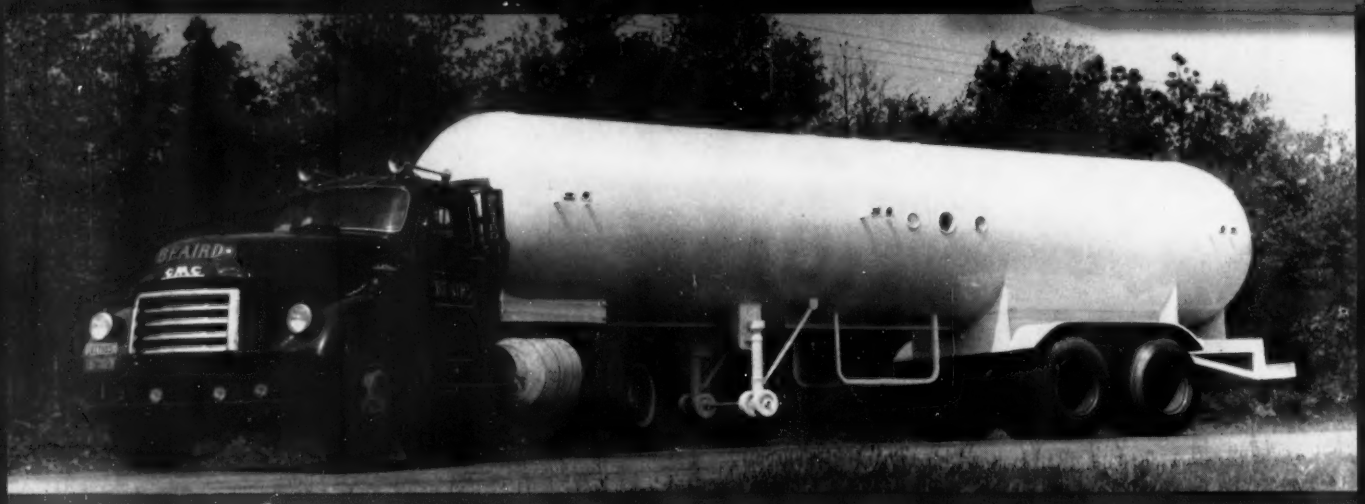
Anhydrous Ammonia

Pressure Bulk Storage

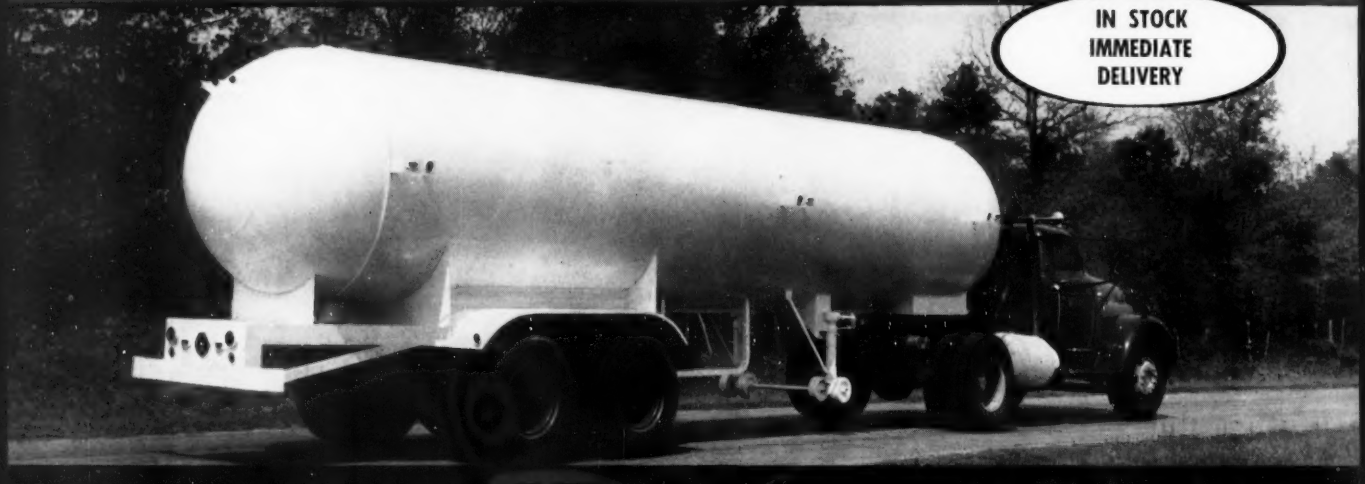
Transports

Filling Station

LPGA



Now . . . 1,000 BONUS GALLONS EVERY TRIP



. . . WITH BEAIRD *Payliner* TRANSPORTS

You can actually count on a Beaird Payliner single-tank transport to do your job faster and for less money. With bigger legal payloads, one Payliner can mean an extra $4,000 profit, in a single year's operation. And low original cost plus long term financing starts you saving the day you buy.

EXTRA CAPACITY SAVES YOU TIME

You haul bigger loads on a time-saving schedule and save money doing it. Beaird Payliners fill quickly and have front and rear outlets to speed up unloading. Their low center of gravity and excellent balance makes them tops in maneuverability . . . reduces wear and tear on operator and equipment.

BUILT-IN RUGGEDNESS SAVES YOU MONEY

Structurally designed to eliminate excess dead weight, Beaird Payliner tanks are formed from high tensile steel, 100% x-ray of seams and stress relieving assures maximum strength and safety. The entire unit is fabricated according to 1952 ASME code for 250# or 265# working pressure.

PRODUCT ENGINEERED SIZES FOR IMMEDIATE DELIVERY

Single-tank Payliners: 7,200 w.g. capacity for Propane or Butane — 6,165 w.g. capacity for Anhydrous Ammonia.

Twin-tank Payliners: 5,600 or 6,000 w.g. capacity for Propane or Butane — 5,380 w.g. capacity for Anhydrous Ammonia. Other sizes to meet special operating requirements are available on custom order.

Buy full load capacity — Write today for a quotation on a Beaird Payliner transport sized "just right" to fit your hauling needs and financed to fit your pocket.

THE J. B. BEAIRD COMPANY, INC.

BEAIRD

L-P Gas | Anhydrous Ammonia | Pressure Bulk Storage | Transports | Filling Station

LPGA

Petty & Son... Share the profits

dissatisfied in any way, our business will suffer. On the other hand, if they share in the success financially, we feel they are bound to be happy. We have always felt that if we make money, we should share it with our employees. They make the business a success—or failure."

The bonus arrangement, based on the number of plant or bulk service installation sales annually, really pays off for everybody concerned.

Here is how it works:

"We figure that it takes about 75 plant sales a year to break even," explained Mr. Petty. "When 40 plants are sold in the first six months of each year, we give each employee one per cent of the gross sales. After we give similar bonuses for 80 plants sold during the 12-months' period we present Chrismas bonuses on all plants sold above eighty for the year."

Mr. Petty is quick to point out the advantages of such a plan, which he considers eminently fair to his employees.

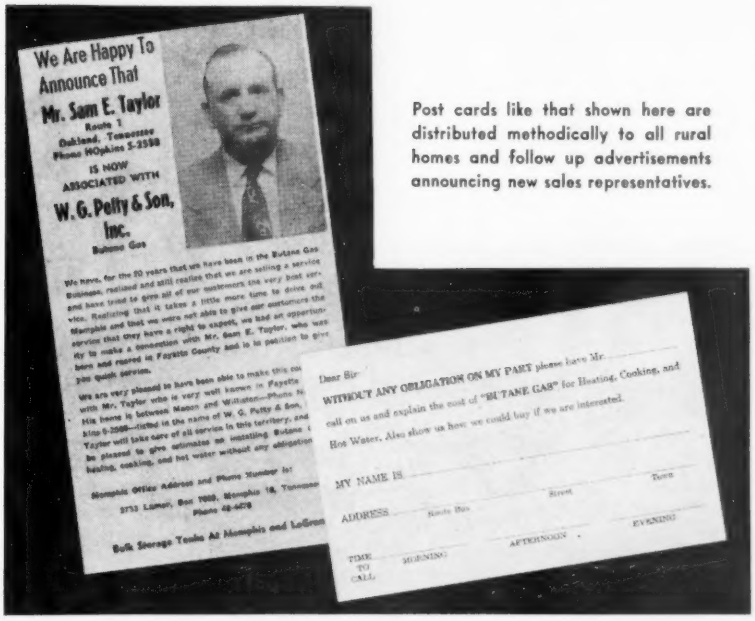
One employee, anxious to help surpass the needed goal for receiving bonuses, canvassed a rural area near his home. He turned over the names of three likely prospects to the elder Mr. Petty one day.

Advertising is coupled with the profit-sharing plan for a one-two sales punch that brings a continual string of prospects, like June Barnett, above, into the store.

Follow up calls important

"When we get such prospects, we make sure they are followed up," said Mr. Petty. "It profits little if we get a barrel of prospects and do not call on them. Besides, it is suprising how successful such visits may be.

"Take, for instance, those three given me by one employee. I jumped into my car—which by the way, has a telephone in it for quick two-way conversation with our offices—and went out to see the three prospects. I landed three installation sales within a few hours. That meant 100 per cent success, and I certainly feel that our profit-sharing led to closing all of the deals."



Post cards like that shown here are distributed methodically to all rural homes and follow up advertisements announcing new sales representatives.

Naturally, all prospects suggested by employees do not buy plants. Enough purchase them, however, to make the deal quite worthwhile to the firm and its employees.

Sales made serve to spur the employees on to find more prospects, according to Mr. Petty. He says that the bonuses stimulate his people to keep their eyes open and their ears tuned for prospects. For such alertness, the employees are entitled to part of the earnings, he says.

Long-time employees

The profit-sharing plan gives the firm stable employees. They stay with W. G. Petty & Son after they join it. Jeff Droke has been with the company as a fuel

Sell Satisfaction
Sell *Peerless*
and
"KEEP" the profits!

Why take Quality for granted . . . why jeopardize your reputation and profits on brands of questionable ability to stay sold? . . . Call-backs, service calls, complaints and dissatisfied customers rob profits and reputation.

Peerless has New Styling that appeals to all . . . that clinches the sale . . . with engineered perfection that provides the heating performance you'll want to sell.

Only Peerless has exclusive Directional Louvers that provide best circulation and keep walls clean. This is only one of the many desirable features that sell Peerless . . . and keep it sold.

Made to Sell
Made to Last
Made to Satisfy

Peerless
GAS
CONSOLES

A full range of sizes . . . 11 models in all . . . from the 14,000 B.T.U. "mighty midget" to the 60,000 "low-boy." Radiant and plain models.

Write today for five color brochure that gives you every detail on the most distinctive profit line.

A GILT EDGED INVESTMENT IN SALES, PROFITS AND SATISFIED CUSTOMERS

SELL THE HEATERS MOST FREQUENTLY ASKED FOR BY NAME.

ONLY PEERLESS OFFERS MORE EXCLUSIVE FEATURES THAT MAKE SELLING EASY

PEERLESS MANUFACTURING CORP.
LOUISVILLE 10, KY.

man for 18 years. Frank Kierolf, a salesman, has had a similar tenure. Louise Palmer tops both with 19 years service.

Jesse Hart and Mrs. Marjorie Acree have 15-year records with the company. Howard Cook and Leon Boswell have served there in excess of 10 years.

A blackboard listing the number of installations sold keeps sustained interest throughout the year among the employees. This is a reminder that bonuses are coming up — or a warning that sales must increase in order to earn the extra money!

"Mrs Acree keeps these records up-to-date," said Mr. Petty, "and you would be surprised at the interest they create and hold. It is easy at a glance to tell just how many sales are necessary before our employees will receive their bonuses. Everybody works toward achieving the 40 or 80 figure, and after 80 they seek to go even higher and get Christmas bonuses."

Many leads for plant sales are acquired by going from door-to-door in rural sections. Some of the employees do this on part of their off-time. The firm constantly advertises its motto: "Petty L.P. Gas Service Begins Where the Natural Gas Line Ends." That gives the company all of the rural territory to canvass.

The elder Mr. Petty, who looks much younger than his 64 years, believes their operation is the most unusual in the country for an L.P. gas company. The firm embraces domestic installations, fuel and appliances, but is completely devoid of carburetor conversion work.

All through the years, new installations have provided the bulk of the trade. The firm, which now sells more than a million and a quarter gallons of L.P. gas a year, covers the area from Memphis to Grand Junction, Tenn., and has bulk plants in Memphis and La-Grange, Tenn.

"With that setup," said Mr. Petty, "we can reach any customer by driving not more than 25 miles. Our territory is broken down into four routes. All are covered once a month, with a checkup on the gas situation and possible needs for appliances and services."

Back in 1934, the company had a much larger territory and eventually expanded into six locations. However, Mr. Petty explained that cutting down the number of plants while keeping up the volume of business enabled the firm to cut costs and operate quite successfully.

Petty & Son . . . Bonuses, post cards and pencils are no substitute for hard work

Advertising important, too

While the profit-sharing plan is one reason for the dealership's success, another reason is a program of advertising and promotion. The firm does not advertise any longer in the Memphis daily newspapers, because Mr. Petty felt that the message was not getting into the spots desired.

But the firm does advertise extensively in county newspapers. One good way of developing business is to carry an ad in the county paper with a picture of the local or sectional representative of W. G. Petty & Son. Whenever a new representative joins the company, such an ad is used so that people will know about him. Telephone numbers are given so they can call him when desired.

Cards offering to have a salesman come by and explain the cost of butane gas and other facts are distributed methodically to all of the rural homes. These cards may be filled in and returned, postpaid.

Post cards really work

"That has proved an excellent means of getting business," said Mr. Petty. "The good thing about it is that you never know when they will come back to you. Once we got a card from a prospect two years after it was left in the home—and a sale was made. These cards are always good."

Literature is left in the homes, along with the cards.

W. G. Petty & Son also does a top promotion job by giving away pencils with the firm name and address on them. These, used in rural homes, are constant reminders of the Petty sales and service features.

"But," said Mr. Petty, in conclusion, "there is no substitute promotion for hard work — and giving good service after you make the sale. If we fail in these two things after selling a huge bunch of prospects, then our business will decline. We give our customers free service on adjusting ranges and other appliances, and make it a part of our work to please them in every way." ■

Salesroom and offices of W. G. Petty & Son, one of the mid-south's leading L. P. gas firms.

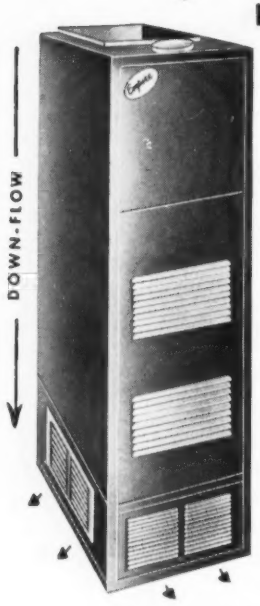
YOU'VE GOT A SURE WINNER

WHEN YOU SELL THE

New Empire

FAST SELLING LOW COST GAS CENTRAL HEATING UNIT

EASY TO INSTALL—FITS IN SMALL SPACE



MODEL No. CFA 6100 100,000 B.T.U. INPUT

MODEL No. CFA 675 75,000 B.T.U. INPUT

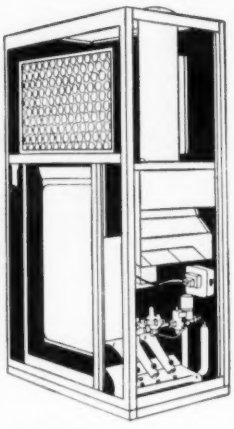
ROUND VERTICAL VENT

DURABLE LONG-LIFE CURVED HEAT EXCHANGER

ONLY 50" HIGH

STEEL CABINET ENAMEL FINISH BEAUTIFULLY DESIGNED

AIR FILTER EASY TO REPLACE OR CLEAN



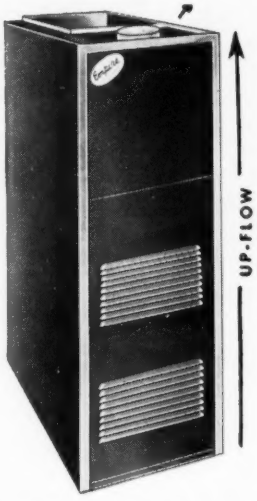
EASY TO SERVICE FROM FRONT

FAN AND LIMIT CONTROLS

AUTOMATIC TEMPERATURE CONTROLS

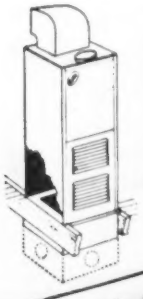
EMPIRE THRIFTMATIC GAS BURNER

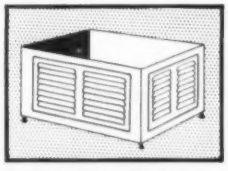
SLIDE OUT DIRECT DRIVE BLOWER EASY TO SERVICE OR REMOVE



MODEL No. FA 756 75,000 B.T.U. INPUT

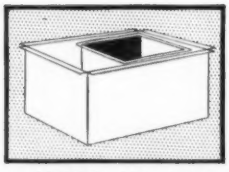
MODEL No. FA 1006 100,000 B.T.U. INPUT





MODEL NO. CFA-1

ABOVE THE FLOOR PLENUM



MODEL NO. CFA-2

THRU THE FLOOR PLENUM

MEMBER national LP-GAS PROMOTIONAL program

AMERICAN GAS ASSOCIATION APPROVED (COMPLIES WITH NATIONAL SAFETY REQUIREMENTS)

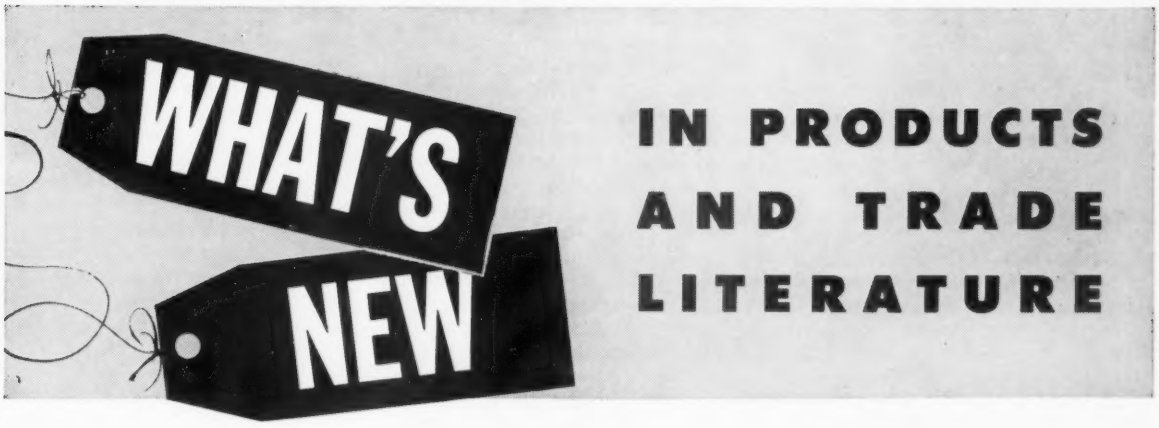
Either combination will cost less to install. Compact in size, the above the floor combination of furnace and CFA-1 plenum is 62" high. The thru the floor combination of furnace and CFA-2 plenum is 50" high above finish floor. Both combinations are 17" wide and 27½" deep. Saves valuable floor space.

EMPIRE

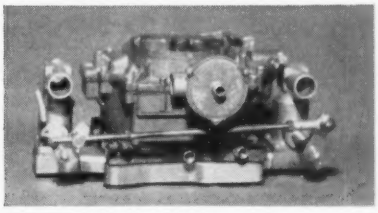
Write for Further Information

STOVE COMPANY

BELLEVILLE, ILLINOIS



For further information on items reviewed in this section use the convenient post-paid Readers' Service Cards on pages 75, 76



Adapter for carburetor

A new base plate adapter assembly which makes a combination LPG and gasoline carburetor of Carter, Rochester or Stromberg four-barrel carburetors has been announced by Nicson Engineering Co. Two Century 3-C metering valves are incorporated in the assembly. These are interlinked so one operates with the primary and the other with the secondary throttle of the gasoline carburetor.

The base plate assembly is mounted between the gasoline carburetor and the manifold. The L. P. gas is introduced below the throttle plates of the regular gasoline carburetor, which serve to control the volume of either fuel that is in use at the time. Electric fuel shut-off valves connected to a selector switch may be used to change from L. P. gas to gasoline and vice versa, or to close both valves simultaneously. The connection between the regular gasoline carburetor and the muffler is not disturbed —both units are simply raised by the thickness of the base plate and the extra gasket. According to the manufacturer the base plate adapter assembly provides no restriction to the air flow through the gasoline carburetor.

Nicson Engineering Co.

Circle 1 on Readers' Service Card

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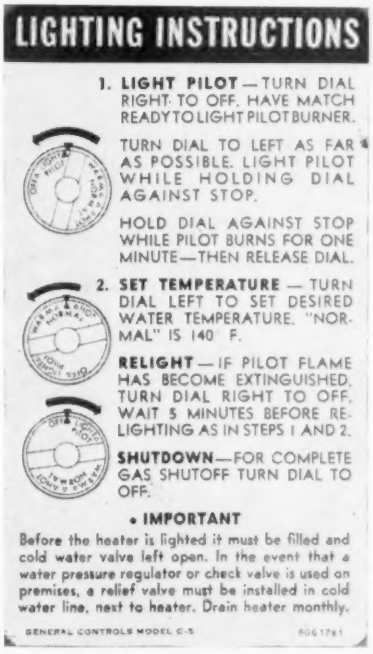
LIGHTING INSTRUCTIONS

1. **LIGHT PILOT**—TURN DIAL RIGHT TO OFF. HAVE MATCH READY TO LIGHT PILOT BURNER.

TURN DIAL TO LEFT AS FAR AS POSSIBLE. LIGHT PILOT WHILE HOLDING DIAL AGAINST STOP.

HOLD DIAL AGAINST STOP WHILE PILOT BURNS FOR ONE MINUTE—THEN RELEASE DIAL.

2. **SET TEMPERATURE** — TURN DIAL LEFT TO SET DESIRED WATER TEMPERATURE. "NORMAL" IS 140° F.

RELIGHT—IF PILOT FLAME HAS BECOME EXTINGUISHED, TURN DIAL RIGHT TO OFF. WAIT 5 MINUTES BEFORE RELIGHTING AS IN STEPS 1 AND 2.

SHUTDOWN—FOR COMPLETE GAS SHUTOFF TURN DIAL TO OFF.

• **IMPORTANT**

Before the heater is lighted it must be filled and cold water valve left open. In the event that a water pressure regulator or check valve is used on premises, a relief valve must be installed in cold water line, next to heater. Drain heater monthly.

GENERAL CONTROLS MODEL C-5

Self-adhesive foil plate

A new type, self-adhesive foil plate for use as a rating plate, and for lighting instructions on gas water heaters has been developed by the Avery Adhesive Label Corp.

Called "Purma-Plate-100," this silk-screened, bright-hard aluminum plate has earned acceptance from the American Gas Association after undergoing a series of extensive tests in the AGA's Cleveland laboratories.

Avery's tight-gripping Purma-Plate-100 is really self-adhesive, requiring no moistening for swift fingertip application. Available in easy-to-use, split-back form, it adheres permanently to any clean, smooth surface without peeling, popping or curling.

Avery Adhesive Label Corp.

Circle 2 on Readers' Service Card

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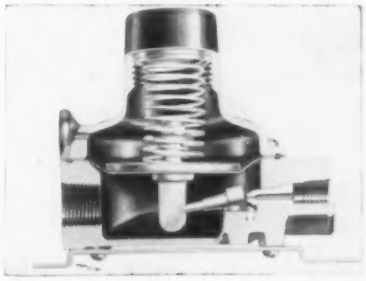

LPG regulator

The "Sel-Pac No. 1605" L. P. gas regulator is a new, small regulator with big regulator features. It is designed for very accurate control of gas pressures and with

For further information on these products use Readers' Service Cards on pages 75, 76

sufficient capacity for the average domestic load of water heater, range, refrigerator and space heater. The new unit is relatively small in size but unusually large in capacity. It has many of the refinements found in larger, more expensive regulators.

A removable brass orifice with straight-through flow is designed in a way to avoid moisture traps and, therefore, minimize freeze-ups. The regulator is equipped with a large area "bug" screen to reduce field service calls. An unusually large diameter soft spring provides a dependable control of the flame height.

This regulator is available in various combinations utilizing "Sel-Pac's" throw-over valves, disc check manifolds and various types of POL connections.

Selwyn-Pacific Co.

Circle 3 on Readers' Service Card

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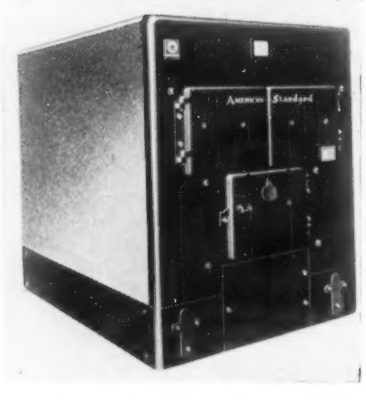

Cast iron boiler

A completely new cast iron boiler for use with all types of fuels has been announced by the plumbing and heating division, American Radiator & Standard Sanitary Corp.

The new "A-7" boiler is designed for maximum output rating per dollar cost in commercial, industrial and institutional hot water or steam heating. Abundant indirect heating surface assures high efficiency and economical operation. Finned surfaces in flues and crown sheet extract maximum heat from combustion gases.

Available in eight sizes, from 5 to 12 sections, the new boiler is light in weight and compact in design. It replaces the American-Standard No. 36 Water Tube, the No. 4 and No. 5 Redflash, and the larger No. 3 Redflash boilers.

A steel base is available as an optional feature. The base eliminates the digging of a pit or construction of a special fire brick base for automatic firing. The boiler is available with automatic firing for gas.

Performance ranges from 2630 to 6380 sq ft net steam rating, 4345 to 10,200 sq ft net hot water rating. Ratings are approximately the same for all fuels.

High water level with waterways designed upward and outward assures proper internal circulation, quicker and smoother steaming. Special tappings are provided for external-type water heaters. There also are nipple port inspection tappings.

American Radiator & Standard Sanitary Corp.

Circle 4 on Readers' Service Card

■

Top burner control

New top burner controls designed to eliminate the guesswork in food preparation on the range surface are being shown for use in commercial cooking appliances.

The new automatic control device, developed by Robertshaw-Fulton Controls Co., operates very much like the familiar oven heat control. Users of the top burner device need only select the proper cooking temperature, set a simple dial and be assured the temperature will remain constant for an indefinite period. The effect of the new control, it was pointed out, is to convert ordinary cooking vessels into automatic heat controlled appliances.

Robertshaw-Fulton Controls Co.

Circle 5 on Readers' Service Card

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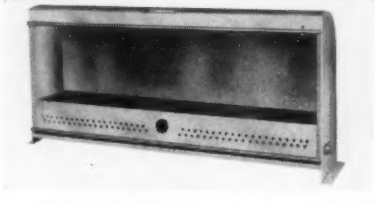

Portable heater

A new bottle gas portable heater has recently been placed on the market by the Bel Echo Metal Products Co. It is designed for sportsmen, or wherever portable heat is required such as duck blinds, cabins, camps, ice fishing huts or even barns or garages.

A small tank of bottle gas will last an entire hunting season with ordinary use. It is easy to handle and simple to operate. Food or clothing can be warmed on the ledge over the burner.

Two sizes are now available—an 18 in. heater and a larger 36-in. model. The 18-in. model weighs 10 lb and the 36 in. weighs 17 lb. Both are 14½ in. high.

Bel Echo Metal Products Co.

Circle 6 on Readers' Service Card

■

Built-in oven

Gaffers & Sattler, the gas range division of Utility Appliance Corp., announces the introduction of its first built-in oven and burners.

One of the outstanding features of this range, according to the manufacturer, is the oven sentinel automatic roasting control. It was recently developed by the company's engineers in conjunction with General Controls Co. The dial of the oven sentinel can be set to rare, medium, or well-done, or any point in between. The stainless steel probe is inserted in the meat, and the oven turned on. When the roast is completed the oven automatically shuts off, and a signal indicates the meat or poultry is ready for serving.

Another feature is the 10 position "Broil-A-Vator," a broiler elevator that utilizes the entire depth of the extra-large "Char-Glo Hi-Broiler." Gaffers & Sattler's rotisserie is also standard equipment in the built-in models.

The top burner timer shuts off automatically when cooking time is complete. Low-heat pilots save fuel and keep range cool to the touch; pressure regulator maintains an

For further information use Readers' Service Cards on pages 75, 76

even flow of gas to all burners regardless of variation in fuel supply, and the gas filter guards against clogged pilots.
Utility Appliance Corp.

Circle 7 on Readers' Service Card

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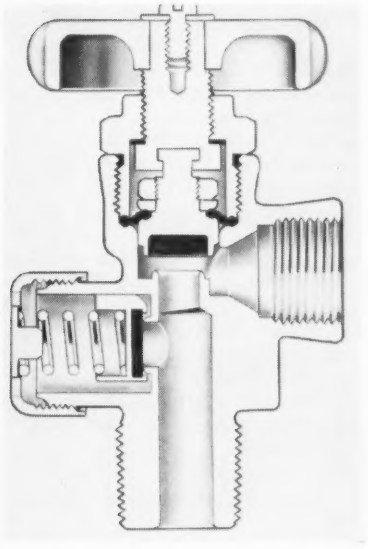

Cylinder valve

Model B100 Fisher cylinder valve, with integral safety relief valve, is available in all standard variations of construction.

According to the manufacturer, it is a rugged forging with stress relieved parts to prevent failure in the field. In this improved design the packless valve assembly is retained by metal to metal lock. No luting dope is required.

The safety relief device has been approved by the Bureau of Explosives for 200 lb propane cylinders. It provides for maximum filling rate, with positive opening and closing.
Fisher Governor Co.

Circle 8 on Readers' Service Card

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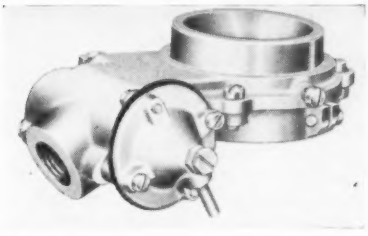

Adapter-mixer

A new style adapter-mixer for use in making L. P. gas conversions has been announced by American Liquid Gas Corp. It marks a radical improvement over the previous model in that the overall height has been materially reduced. The total installation height, including the idle plate, is only ⅞ in.

This adapter-mixer, known as "Algas 1600 Series," permits the use of factory engineered carburetion when gasoline operation of the engine is required. It consists of a venturi-type airhorn adapter and idle adapter plates to fit standard gasoline carburetors. It is designed for use on smaller applications up to 400 cu in. displacement.

This new unit is offered in two airhorn sizes, 2-5/16 in. and 2⅝ in. and in most cases the standard air cleaner can be retained. It attaches to both straight and Donaldson type airhorns on the gasoline carburetor by means of a positive type clamp ring. It has a full range power adjustment with built-in economizer.

The Algas 1600 Series adapter-mixer does not have priming facilities, consequently a converter, either "Algas 1900 Series" or "Algas 1500 Series" must be used and equipped with either an electric or manual primer for starting.
American Liquid Gas Corp.

Circle 9 on Readers' Service Card

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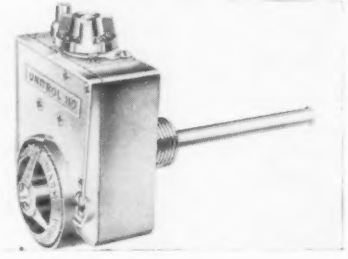

Water heater control

Robertshaw-Fulton Controls Co. has announced production of the Unitrol 110, an automatic control for gas water heaters with 100 per cent shut-off safety feature.

With the previously announced Unitrols 400 (deluxe) and 200 (standard), Robertshaw - Fulton now offers a complete line of newly-designed water heater controls, streamlined to match the trend to modern styling of water heaters.

The magnet assembly, filter cartridge and valve assembly of the model 110 are interchangeable with those of other Unitrols. Its connections are straight down and parallel, contributing to its compact appearance. Its legible temperature and gas cock dials can be read from both top and front. A red push button at the top permits quick resetting of the pilot.

The Unitrol 110 is constructed to withstand excessive stress. Other advantages listed include its large non-clog pilot gas passage ports, big capacity filter cartridge to prevent ports and clogging, powerful electro-magnet, and improved "C" valve adjustment.
Robertshaw-Fulton Controls Co.

Circle 10 on Readers' Service Card

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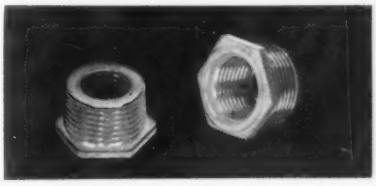

Dielectric bushings

To supply a growing demand from the gas industry, May Co. has added two new sizes to its line of nylon dielectric bushings. Mayco dielectric bushings are now available in size ½ in. x ⅜ in. to 1½ in. x 1¼ in. inclusive.

Mayco dielectric bushings are made from Plaskon virgin nylon that withstands temperatures in excess of 300° F and are virtually indestructible. They are designed for use on gas heaters, meters, stoves, water heaters — wherever dissimilar metals are joined — to prevent electrolysis damage. Any type of dielectric fitting, coupling, union, etc., can be made at the cost of a few pennies by inserting one of these bushings into an ordinary threaded pipe fitting.
May Co.

Circle 11 on Readers' Service Card

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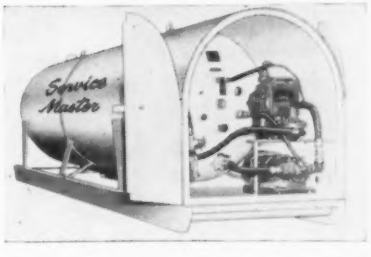

Portable filling station

The "Service Master," a portable butane-propane filling station, skid mounted for easy movement, has been announced by Master Tank & Welding Co.

The accessibility and convenience of the Service Master for filling small capacity fuel tanks add to the advantages of L. P. gas as a fuel for internal combustion engines. It enables the bulk plant operator to level high peak loads by increasing his summer gas load. It is valuable for servicing vehicles when the bulk storage plant is tied up for long periods of time in the unloading of a transport or the loading of a bobtail. It is also designed for use by fleet owners and highway filling stations.

The Service Master is shipped ready for use when electric power is installed. It comes equipped with hose, visual float gage, highest quality fittings, and explosion-proof motor and switch to operate the pump. Heavy duty doors with fittings for a lock make it tamper-proof, and extra strong lifting lugs are attached with a 6 in. continuous weld to facilitate handling the unit. The Service Master is finished with high quality hot process enamel.

It is available in 1000 to 6500 water gallon capacities.

Master Tank & Welding Co.

Circle 12 on Readers' Service Card

■

Non-vented heater

The newest product of the Hunt Heater Corp. is the Hunt "Novent" heater which is designed for heating added rooms, attics, or any hard-to-heat areas in homes.

All burnt gases and odors are forced outside without additional pipes or flues. The Hunt Novent burns no room air. Floors are heated first by the heater then hot air circulates through the room to prevent overhead stratification.

The cabinet extends only 8½ in. into the room. It automatically maintains the draft-free level desired.

Three powerful squirrel-cage blowers, single motor operated, provides 460 cu ft of air per minute. Heating units are welded throughout, then tested to assure gas-tight, leak-proof operation.

The Novent's burner input rating is 35,000 Btu. It operates on 110-volt, 60 cycle alternating current. The heat exchanger carries a 5-year warranty against rusting or burning out. Controls and other component parts are guaranteed for one year.

Hunt Heater Corp.

Circle 13 on Readers' Service Card

■

TRADE LITERATURE

Custom house guide

The 1956 edition of the Custom House Guide, a foreign trade encyclopedia covering 1688 pages, has been issued for everyone requiring information on foreign trade.

Included are latest U. S. rates of duty in accordance with all acts of Congress and trade agreements, the revised Tariff Act (1930), revised U. S. Customs Regulations and Administrative Provisions of the Tariff Act and the Internal Revenue Code, also revised and amended.

A new feature is "Marking of Imports," a digest of all rulings concerning import marking.

Of particular interest to shippers doing business through the various ports of the U. S. and its territories, Canada and the Philippines, are the Guide's port sections giving port charges, firms servicing shippers, transportation facilities and other information about each port.

Custom House Guide

Circle 14 on Readers' Service Card

■

Safety Manual

A "Supervisors Safety Manual" has been published by the National Safety Council.

Written by staff engineers of the Council's industrial department and carefully reviewed by safety experts from business, industry and government, the manual provides foremen with a comprehensive guide to all phases of industrial safety.

The manuel provides the supervisor with a basic knowledge of accident prevention techniques and human relations know-how. It includes material on the human side of safety, maintaining interest in accident prevention, first aid, protective equipment, housekeeping, material handling, machine guarding, portable power tools and fire prevention. To members, $3.25; non members $6.50.

National Safety Council

Circle 15 on Readers' Service Card

■

Control bulletins

Two separate six-page bulletins were recently released by A-P Controls Division of Controls Corp. of America, covering their new "Fifty-Five" gas control.

Each bulletin provides full information regarding the design and construction of this new control. Mechanical specifications, dimensions, design details and capacities are supplied. Four thermostatic accessories used on the Fifty-Five are amply illustrated and described.

Bulletin G170, has information and data of interest to design and production engineers. Bulletin G170A, is tailored to the interests of sales managers, distributors, and dealers.

A-P Controls Corp.

Circle 16 on Readers' Service Card

■

Service tools catalog

New appliance servicing items such as "Griffoam" leak detector, a serviceman's complete wrench kit for flared fittings on ranges, "Gripso" pliers and wrenches, and other tools required in the industry are among those shown in the 1956 Griffiths catalog just issued.

A valuable feature in this new catalog is a set of three orifice sizing tables for natural and butane and propane gases. The standard line of Griffiths' orifices and conversion parts is fully illustrated.

E. F. Griffiths Co.

Circle 17 on Readers' Service Card

■

Price lists

The Weatherhead Co. has recently published price lists covering equipment and cylinders for the liquefied petroleum gas industry and these are available upon request.

There are three price lists altogether. One covers cylinders, another on cylinder equipment and the third on equipment for systems.

Quantity discount amounts are indicated on a separate sheet for all items.

The Weatherhead Co.

Circle 18 on Readers' Service Card

FOR MORE INFORMATION
about New Products in this issue . . .

use these time-saving

READERS' SERVICE CARDS

Each New Product or Trade Literature item reviewed in this issue is numbered. To get further information about items that interest you, circle the corresponding numbers on the Readers' Service Card below; then PRINT your name, title, company and address plainly and drop the card in the mails (no postage is needed).

BPN will take it from there and ask the manufacturer to send you, promptly, the data you want.

Circle the Item Number here

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Please send me further information about the items circled below:

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46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

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BUSINESS REPLY CARD

First Class Permit No. 6955, Sec. 34.9 P. L. & R., Los Angeles, California

BUTANE-PROPANE NEWS
198 SOUTH ALVARADO ST.
LOS ANGELES 57, CALIF.

KEEP UP WITH WHAT'S NEW
in Products, Literature and Service

use these time-saving

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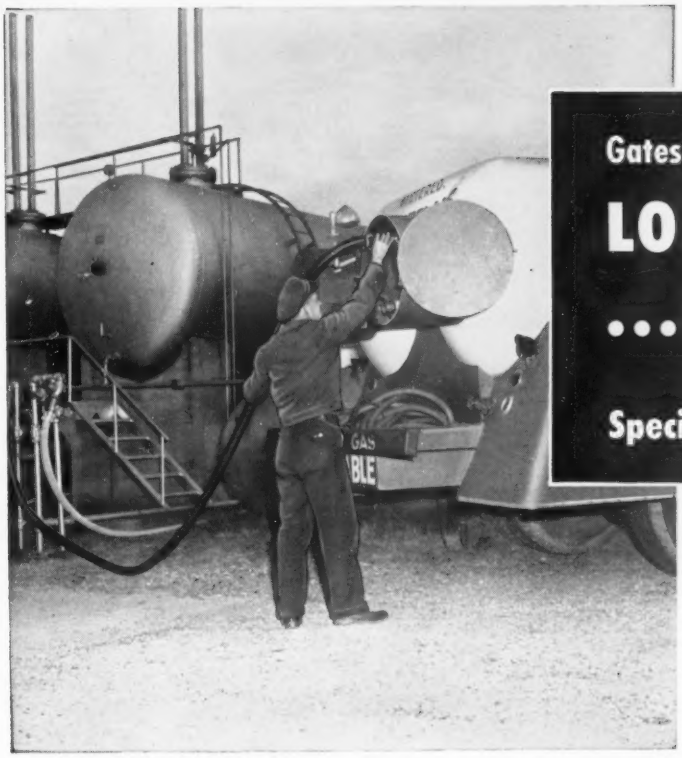


Gates Butane-Propane Hose gives you

LONGER SERVICE ...EXTRA SAFETY

because it's

Specially Engineered for LPG Use

Gates engineers designed 20B-HB hose *especially* for LPG applications—taking into account *every problem* the hose would normally encounter in service of this type. Rubber compounds, braid and static wire were thoroughly tested to provide an extra margin of strength, durability and safety.

THE RESULT...year-round performance that saves you money!

1 COVER . . . tough, black, long-lasting rubber that resists abrasion and sunlight, prevents cover "blisters".

2 BRAID . . . high-tensile-strength cords tightly braided to provide ample strength for the working pressures under which butane-propane liquids and gases are handled.

3 TUBE . . . black, oil resistant, chemical rubber tube resists the permeating action of liquid butane and propane. It will not swell and will never grow soft or spongy.

4 STATIC WIRE . . . built-in stainless steel static wire reduces the dangers of static electricity.

Gates 20B-HB Butane-Propane Hose meets all the stringent requirements of the National Board of Fire Underwriters, Interstate Commerce Commission, American Gas Association, Texas Railway Commission, and states with L-P Gas laws.

There are Gates Engineering Offices and Distributor Stocks in all industrial centers of the United States and Canada, and in 70 other countries throughout the world. *The Gates Rubber Company, Denver 17, Colorado.*

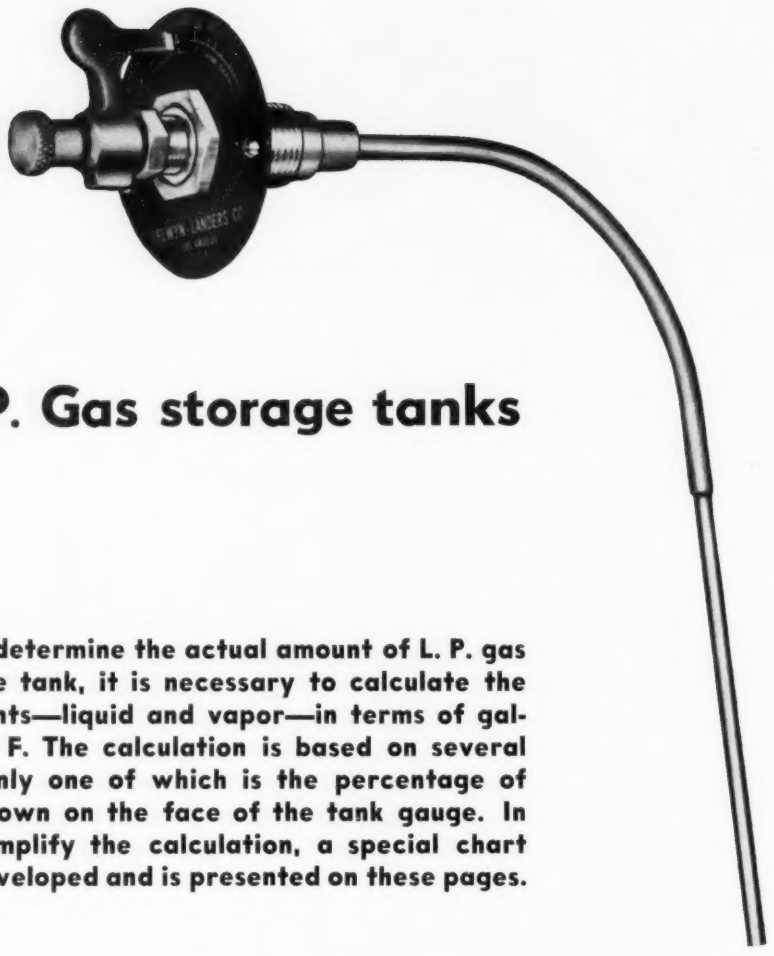
Gates — The Mark of Specialized Research

Descriptive Data

Inside Diameter	Outside Diameter	Reinforcement	Working Pressure PSI	Maximum Length	Weight (100 ft.)
1/2	1	Braided	350	350	32
3/4	1-1/4	Braided	350	250	45
1	1-21/32	Braided	350	175	75
1-1/4	1-7/8	Braided	250	50	90
1-1/2	2-7/32	Braided	250	50	110
2	2-5/8	Braided	250	50	140

TPA 99

Gates Butane-Propane Hose



A manually operated rotary fuel gauge.

Gauging L. P. Gas storage tanks

In order to determine the actual amount of L. P. gas in a storage tank, it is necessary to calculate the total contents—liquid and vapor—in terms of gallons at 60° F. The calculation is based on several variables only one of which is the percentage of capacity shown on the face of the tank gauge. In order to simplify the calculation, a special chart has been developed and is presented on these pages.

By CHARLES MAC SPORRAN, Engineering Department • Phillips Petroleum Co.

WHEN gauging an L. P. gas storage tank, it is not sufficient to measure only the liquid contents as indicated by the liquid level gauge, unless corrections are made for the liquid temperature and for the vapor contents. To properly gauge the tank, it is necessary to know the total contents in terms of gallons at 60° F, otherwise there would be no basis for truly determining and comparing storage inventories, product purchases and sales. The gallon measured at a temperature of 60° F is the commonly accepted standard for L. P. gas.

The rotary and float type magnetic gauges being the most commonly used in L. P. gas bulk storage plants, this article will be confined to the percentage of volume method of gauging storage tanks.

The design and function of both the rotary and float type magnetic liquid level gauges are well known to the operators of L. P. gas plants, who will benefit most from this article; therefore, it should be unnecessary to describe both gauges or to explain their operation. When reading the dials of either gauge, the reader knows that the percent-

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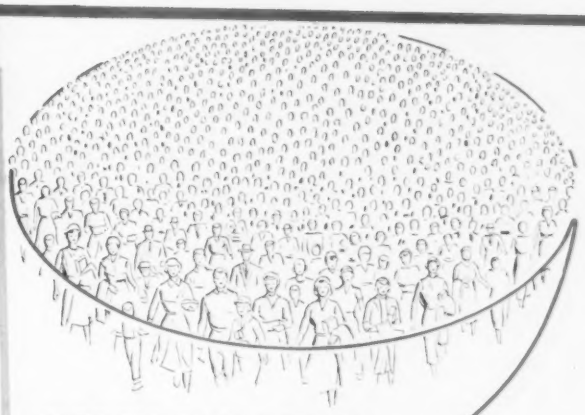

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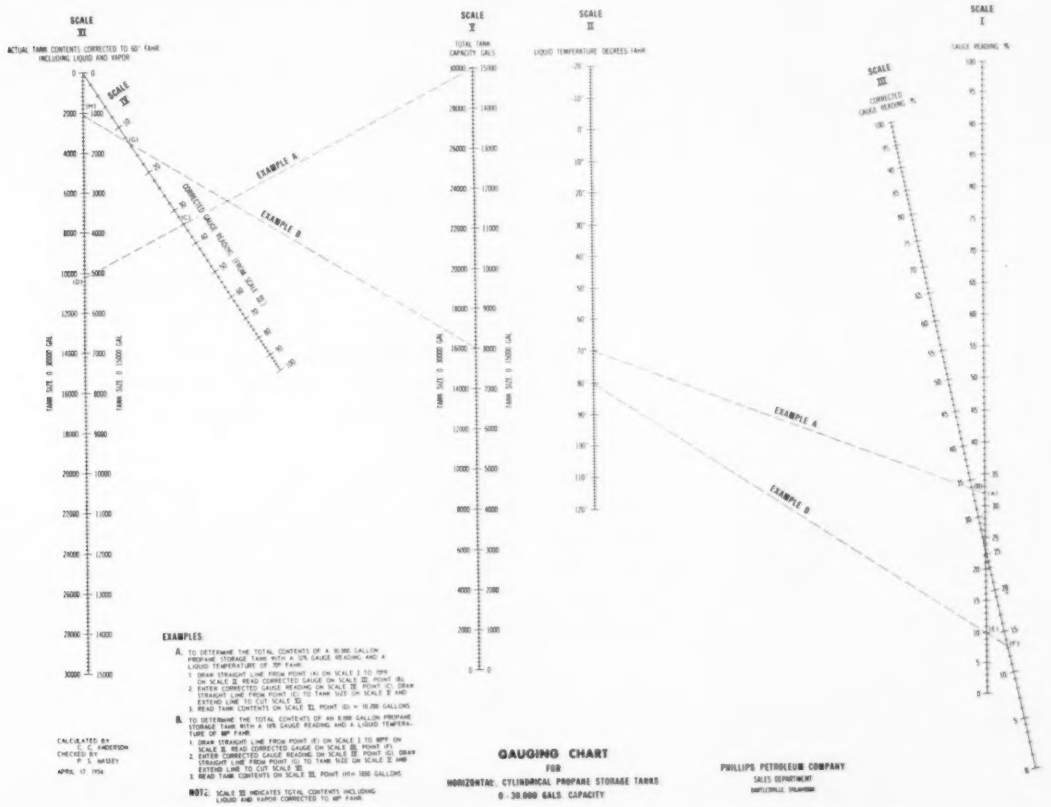
age markings imprinted thereon represent the percentage volume of the tank contents. He may or may not know that these percentage markings represent only the volume contained in a flat-headed cylindrical tank. They make no provision for the shape of the tank head, whether they be elliptical or hemispherical in form. Neither do they make provisions for the liquid equivalent of the vapor.

To make it possible to correct the tank gauge readings to compensate for the conditions mentioned above, the gauging chart provided in this article includes all of the compensating factors to readily and simply determine the total tank contents of both liquid and vapor measured in terms of liquid volume at 60° F. The chart is prepared for commercial propane conforming with NGAA specifications and for percentage of tank capacity readings using either the rotary or float type magnetic gauge. The chart can be used for any size cylindrical vessel of capacities up to 30,000 gallons. No correction is made for the shape of the tank heads because their effect in total volume measurement is insignificant, whether they be elliptical or hemispherical.

The chart will be of little value if the liquid level gauge readings are erroneous, if the liquid temperature reading is not true or if the tank is not level. All of these factors must be taken into consideration and properly determined. To correctly gauge the tank within the limitations of the gauge itself, the following points deserve discussion:

1. *Liquid Temperature*

The tank should be provided with a thermometer well in the bottom portion of the tank to make it possible to measure the liquid temperature. When taking temperature readings, the thermometer bulb should be immersed in an anti-freeze solution in the well, for intimate contact and accurate reading. If one is tempted to assume that the ambient temperature or the vapor pressure is a true indication of the temperature of the liquid in storage, it better be understood now that they are not. These give merely a rough approximation of the liquid tempera-



The L. P. gas storage tank gauging chart above makes it possible to correct tank gauge readings to determine total tank contents of liquid and vapor measured in terms of liquid volume at 60° F.

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ture and should not be used for accurate gauging purposes. Because of the slow response to variations in atmospheric temperature, large liquid volumes can be expected to lag in temperature.

Because of the effect of the heat in the sun's rays on the vapor surface of the tank (superheating the vapors) or because of the presence of air in the vapor, we cannot ever depend on the vapor pressure as truly corresponding to the liquid temperature. In cases where it is impossible to measure the liquid temperature and vapor pressure readings are used to arrive at temperatures, it should be understood that a gauging error may be introduced. If this method is necessary, be sure that the pressure gauge is reading accurately by checking it periodically with a master gauge or at least with other pressure gauges available.

2. *Sizing and Installing the Liquid Level Gauge*

The rotary gauge dip tube and the float arm of the magnetic gauge should be sized as recommended by the manufacturer. The bottom of the dip tube should have sufficient clearance with the inside of the tank to permit free rotation, but its clearance must not exceed ½ in., otherwise objectionable gauging errors will result. The magnetic gauge manufacturer recommends a specific length of float rod and counter weight for a specific diameter of tank, which recommendations must be followed, otherwise gauge readings may be in error. Moreover, the dip tube and float arm must not be so limber that they cause sagging and erroneous readings.

The gauges must be installed true to the axis of the tank. If they are installed in the head of the tank, their mounting must be in its center and be level. Should the magnetic gauge be installed in the top of the tank, then the float arm pivot point must be on the horizontal center line of the tank shell.

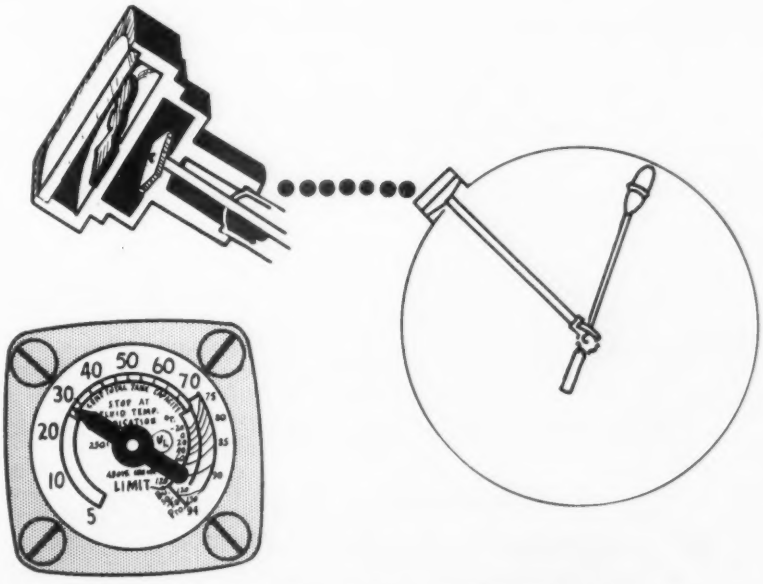
The gauge dial must be set true so that the horizontal position of the float arm will coincide with the gauge pointer at the 50 per cent mark in the case of the magnetic gauge and that the pointer of the rotary gauge will always give the same reading on both quadrants of the rotary gauge dial.

If the capacity of the storage tank is in doubt, have it calibrated or strapped and the capacity calculated.

After the above factors are established, the tank contents may be gauged very simply by the use of the chart reproduced herewith. To understand how the chart is used, the following example will be taken: *Example:* Determine the total propane liquid content (liquid and vapor) of a 30,000 gal. WC storage tank, 108 in. ID liquid level gauge reading 32 per cent. Liquid temperature gauge reading 70° F.

1. Draw straight line from point (a) at 32 per cent on Scale I to 70° F on Scale II. Read corrected gauge reading at point (b) on Scale III.
2. Enter Scale IV at corrected gauge reading point (c) and draw a straight line from point (c) to tank size (30,000 gal.) on Scale V. Extend this line to cut Scale VI.
3. Read total propane liquid contents on Scale VI point (d) = 10,200 gal. corrected to 60° F.

If proper attention is given to the points discussed above, the matter of gauging will become a simple matter, having this new chart to refer to for a quick and dependable solution of the gauging problem. It will be understood, of course, that the accuracy of the chart readings will depend on the accuracy of the liquid level gauge readings. ■



A magnetic fuel gauge, showing operating mechanism.

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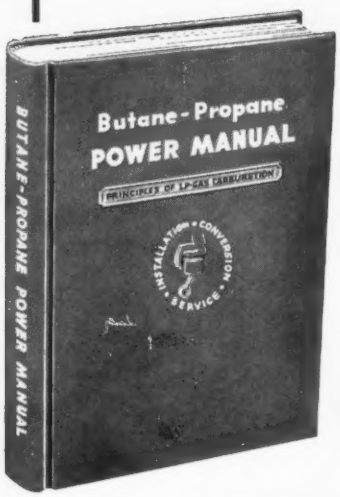

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Inspection of welds by X-ray is one of the quality controls at LINDE that helps assure the superiority of PREST-O-LITE cylinders. In the lead-lined room shown above, a technician is preparing to make an X-ray photograph of a welded section of an LP-Gas cylinder. The developed film will show clearly the penetration, density, and grain structure of the weld, and will serve as a safeguard to assure maximum quality in welding operations. Random production samples are tested in this fashion.

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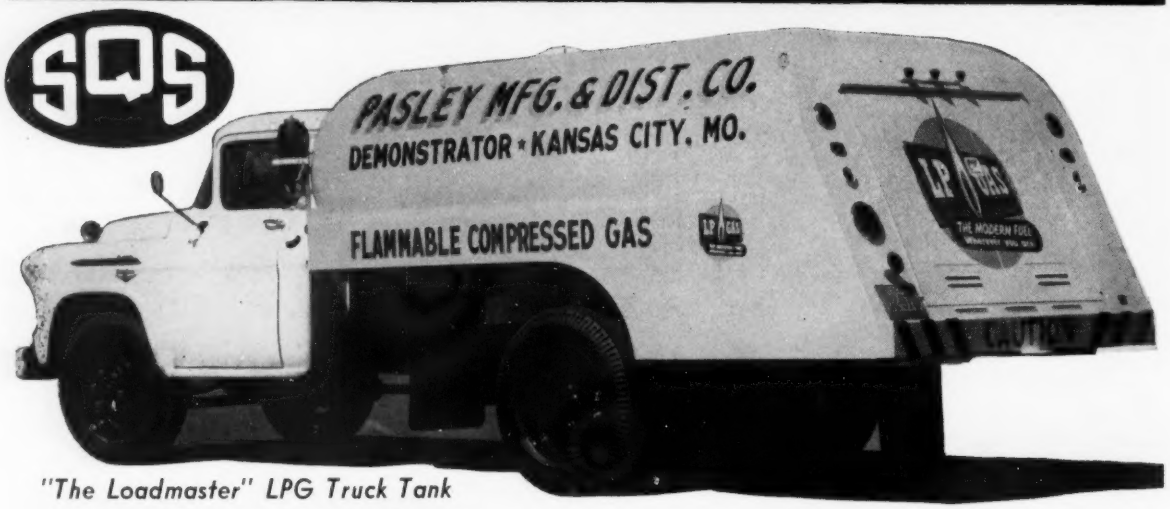

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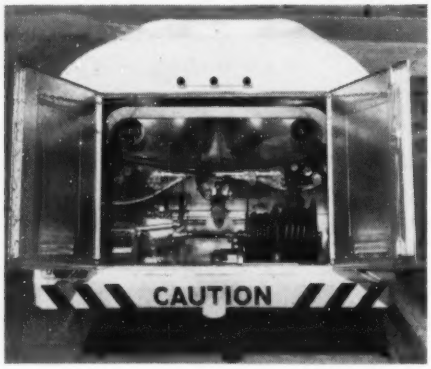

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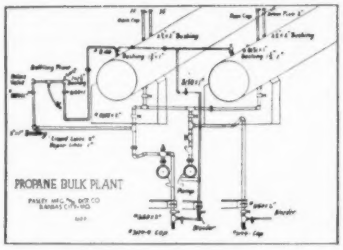

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BPN Washington Report

From BUTANE-PROPANE News Washington Bureau

Home improvement spending increasing

The expected boom in consumer spending for home improvements should this year reach a level 200 to 300 per cent higher than last year, banking experts predict.

Judging from the mounting volume of loans for home modernization and fix-up this business will go a long way toward offsetting the effects of lagging construction of new homes, the financial experts say.

The Federal Housing Administration reports that its home improvement insurance program slumped last year as a result of its drive to weed out chislers. Some 1 million loans totaling more than $645 million were insured by the government last year, compared with 1.5 million loans totaling $890 million in 1954.

Of the total of insured home improvement loans last year, 15 per cent were for heating systems, 9 per cent for plumbing, and the rest for other types of construction.

FHA expects its loan program for home improvements to pick up materially this year, especially if Congress approves, as expected, measures increasing the maximum amount of insured improvement loans from the present $2500 to $3500, and extending repayment period from the present three years to five years, which will make these loans more attractive to homeowners.

Small business tax burdens

Small Business Administration officials are trying to work out methods of easing the tax burden on small business without lowering total government revenues. They hope to come up with a program in time for submission to Congress early next year.

Such a program, however, is going to run headlong into trouble with the larger corporations, because they are the logical sources of revenue to make up whatever revenue is lost by tax cuts to small firms.

SBA has established a special committee which will convene next fall to investigate various suggestions for easing the tax burden on small firms. The purpose is to permit the small concerns to retain a higher percentage of earnings for desperately-needed expansion funds. The problem of expansion fund retention is becoming increasingly important to small firms as local and state personal, business, and property taxes continue to rise.

Congress has had several bills before it to give small firms tax aid by either completely regraduating the corporate tax structure, or by reversing the present basic corporate rate of 30 per cent and the surtax of 22 per cent, so that a firm would pay only 22 per cent tax on the first $25,000 or $50,000 of annual earnings.

Steel situation expected to improve

Gas and oil industry, and its suppliers, are still taking all the steel they can lay their hands on—and would take more if it were available—but the situation is expected to improve over the next few months.

Barring a prolonged steel strike, consumers of steel plate will be benefiting from the easing in demand by the auto and appliance industry for sheet and strip products, according to *The Iron Age*, the national metalworking magazine.

Reports are that steel mills, which several months ago scorned hot-rolled business, are now actively soliciting it, including business in light plate which for some time was almost left out of the mills.

But the situation in the tubular market will be slower to ease, the steel experts say. "There is no such thing as heavy inventory in oil country goods and line pipe," *The Iron Age* comments.

A strike of any importance in the steel industry, however, could bring back shortages even more critical than those of this spring.

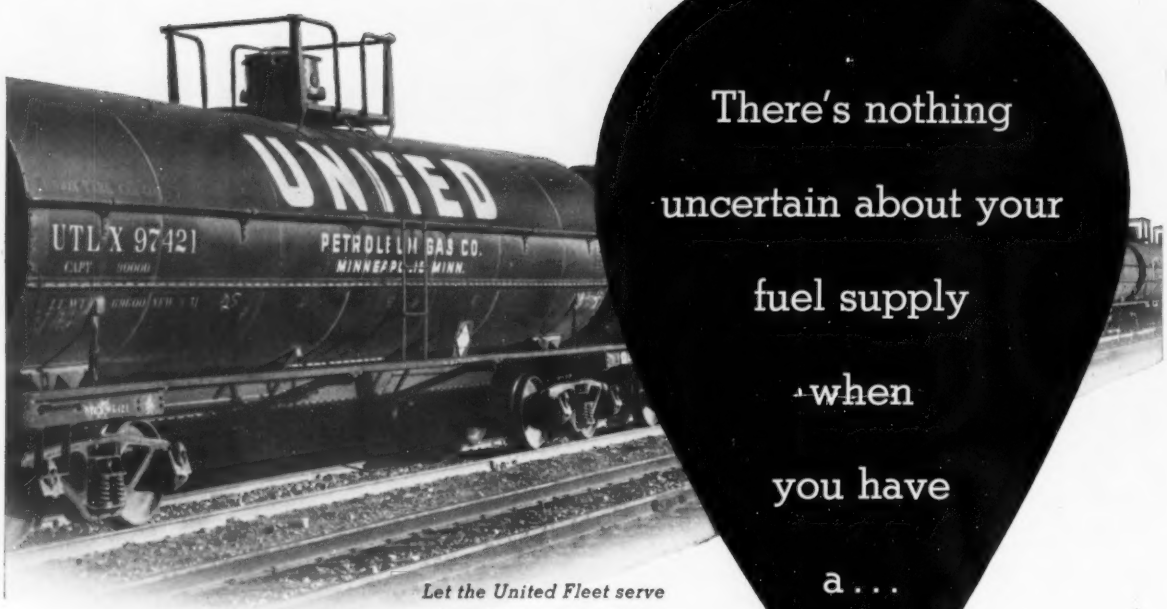
Underground stocks increase

Underground stocks of L.P. gases increased 65 million gal. during April, reaching a total of 179 million gal., the U. S. Bureau of Mines reports.

Of the total reported stocks, 145 million gal. are in Mississippi, Louisiana, Texas, and New Mexico. The remainder are distributed through New York, Michigan, Illinois, Kansas, Oklahoma, and Montana.

Underground stocks of propane totaled 78 million gal., an increase of 42 million gal., butane stocks totaled 86 million gal., 16 million gal. more than at the end of March, and butane-propane mixture stocks totaled 15 million gal., an increase of 7 million gal.

Neil Regeimbal, Correspondent



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CALENDAR

Coming events in the Industry

Aug. 1-3—Central States L. P. Gas Service School — University of Kansas, Lawrence, Kan.

Aug. 5-7—Alabama L. P. Gas Association Convention — Dinkler-Tutwiler Hotel, Birmingham.

Aug. 5-7—West Coast L. P. Gas Association Convention and Trade Show—Sheraton-Palace Hotel, San Francisco.

Aug. 19-21—Georgia L. P. Gas Association Annual Convention—Manger Hotel, Savannah, Ga.

Aug. 19-21—New Mexico LPGA Annual Convention and Trade Show—Hilton Hotel, Albuquerque, N. M.

Sept. 14—Pennsylvania L. P. Gas Association Fall Convention—Penn-Harris Hotel, Harrisburg, Pa.

Sept. 16-18—Ohio LPGA Annual Convention and Trade Show—Cleveland Hotel, Cleveland.

Sept. 17-18—North Carolina L. P. Gas Association Annual Convention — Sir Walter Raleigh Hotel, Raleigh, N. C.

Sept. 17-18 — Virginia LPGA Annual State Convention — Ingleside Hotel, Staunton, Va.

Sept. 19-21—Florida L. P. Gas Association Annual Convention— Ft. Harrison Hotel, Clearwater, Fla.

Sept. 21—West Virginia L. P. Gas Association Convention—Stonewall Jackson Hotel, Clarksburg.

Oct. 2-4—LPGA Management School—University of Wisconsin, Madison, Wisc.

Oct. 14-16—Oklahoma L. P. Gas Association Meeting—Skirvin Hotel, Oklahoma City, Okla.

Oct. 15-17—AGA Annual Convention—Auditorium, Atlantic City.

Oct. 29-30—Minnesota L. P. Gas Association Fall Convention—Leamington Hotel, Minneapolis.

1957

March 10-12 — Indiana LPGA Trade Show and Convention — Claypool Hotel, Indianapolis, Ind.

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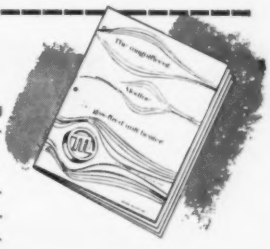

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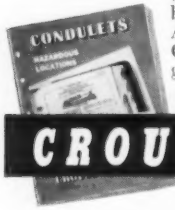
Send For Free Booklet. This comprehensive 82-page booklet gives explosive characteristics of butane and propane gas . . . contains Articles 500 and 510 of the latest revised Code . . . and numerous installation diagrams and photographs.



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BPN NEWS

Thomas will head National Council fund raising job

H. R. Thomas

Harry R. Thomas, vice-president and general manager of Tuloma Gas Products Co., Tulsa, will head up an all-out industry fund raising job as chairman of the National LP-Gas Council membership committee.

Mr. Thomas was appointed by K. R. D. Wolfe, Fisher Governor Co., Marshalltown, Iowa, president of the Council. With the appointment Mr. Thomas becomes a member of the Executive Committee of the National Council in addition to his previous post on the Board of Directors as a producer representative.

A goal of an annual income rate of $750,000 by the end of 1956 has been set by the new membership chairman. Present budget of the National LP-Gas Council is $400,000 for national advertising and public relations.

Membership co-chairmen for five segments of the L. P. gas industry are now being selected by Mr. Thomas. They will represent marketers, producers, appliance manufacturers, equipment manufacturers and tank and cylinder manufacturers. Three national trade associations, Gas Appliance Manufacturers Association, Liquefied Petroleum Gas Association and Natural Gasoline Association of America sponsor the industrywide National LP-Gas Council.

William Wallace concludes week-long sales school

A week-long sales school and clinic, attended by over 40 sales representatives from cities throughout the United States, concluded June 10 at the Belmont, Calif.,

"HOW CAN YOU STOP LOSSES IF YOU CAN'T FIND THEM?"...

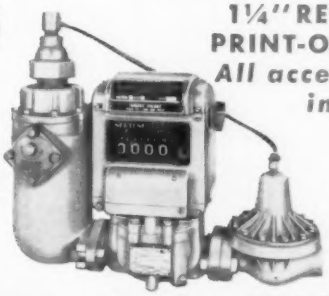
—says Y. L. MARKINS
Markins Butane
Henderson, Tex.

"LP-Gas losses and leakages seldom leave any clues except an empty cash register. Our answer has been to put ticket printing LP-Gas meters on all our tank trucks. We also load our trucks through similar bulk plant meters so we can keep track of every gallon we handle.

"The meters speed deliveries, too. No more working blind, trying to out-guess inaccurate gauges. Our customers like the meter printed tickets . . . proof of full measure received.

"We were careful to select an approved metering system, and find the meters thoroughly reliable, accurate, and low in maintenance."

Free Bulletin 779 shows recommended closed system installation of LP-Gas meters. Ask for your copy today.



1¼" RED SEAL PRINT-O-METER *All accessories included*

Only Red Seal gives you a complete LP-Gas truck metering system in one compact unit. All accessories for accurate metering are included . . . no "extras" to buy . . . fewer connections to make . . . fewer chances for leaks. Safe at all LP-Gas working pressures. Listed by Underwriters' Laboratories. Meets API-ASME Positive Displacement meter code. More Red Seals in service than any other make . . . with a proved record of sustained accuracy and low maintenance. Capacity 5 to 30 gpm. Larger size also available. Choice of ticket-printing or simple direct-reading register.

NEPTUNE RED SEAL LP-GAS METERS

FOR TANK TRUCKS, BULK PLANTS AND REFUELING

Accuracy You Can Bank On

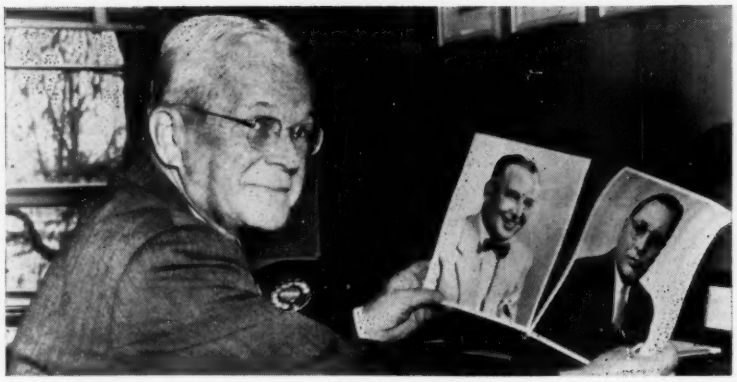
neptune RED SEAL METERS

NEPTUNE METER CO., 19 West 50th St., New York 20, N. Y. *Canadian Factory:* **NEPTUNE METERS LTD. Toronto 14, Ont.**

headquarters of William Wallace Co.

School and clinic sessions were held at the company's plant and laboratory in Belmont and in classrooms set up in Rickey's Studio Inn, Palo Alto. Salesmen attended lectures and seminars on the principles of venting, operation of a gas vent, practical application of venting principles, sales tools and promotional activities and other matters of administrative, corporate and financial interest.

Among the William Wallace executives who conducted lectures and seminars were Alan Kinkead, president, Frank Kohles, sales manager, Metalbestos Division, R. L. Stone, chief research engineer and Frank Fields, research engineer. A review of the company's 1956 advertising and promotion program was presented by Barry W. Boland, president of Boland Associates, the firm's advertising agency.



Alan P. Tappan holds photos of the "Name-the-Burner" contest judges Dean Mitchell, president of AGA, and C. J. McAllister, president of LPGA. Open to all employees of city gas utilities, L. P. gas operators and authorized Tappan dealers, the contest offers $1,000 for the best name suggested for Tappan's new 18,000 Btu gas top burner. Entry blanks and complete details may be obtained from Tappan Stove Co., Mansfield, Ohio.

LPG equipment manufacturers . . .

CAN YOU AFFORD NOT TO FINANCE YOUR CUSTOMERS?

F.A.C.'S *flexible finance plan helps you gain new customers, keep old ones.*

Today your customers are demanding long-term financing. When they don't get it, they don't buy. F.A.C.'s installment sales financing plan meets this demand with a sound, business-like solution to your customer's financing problems.

This service is flexible, so you can adapt it to any particular sales situation. We serve many of the nation's leading LPG equipment manufacturers—financing every product from small cylinders to huge bulk storage tanks.

F.A.C.'s Flexible Financing Plan gives you an extra sales tool—because it's another reason for prospects to buy from you. Why not meet their demand? Don't lose customers. Finance them. We urge you to telephone or wire—one of our officers will be glad to serve you.

FAC Plan FIRST ACCEPTANCE CORPORATION

Minneapolis 2, Minnesota 820 Northwestern Bank Bldg. FEderal 9-7711

Discount Bankers Serving Manufacturers of LP Gas Equipment

Bryant bucks the "do-it-yourself" trend

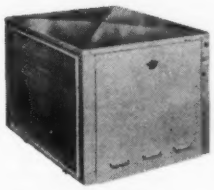
Bryant has one word to say to home owners thinking about a "do-it-yourself" furnace installation . . . *Don't!*

Bryant is taking half-page ads in the August issue of *American Home* and the October *Better Homes & Gardens* to warn people not to take chances with their comfort and safety.

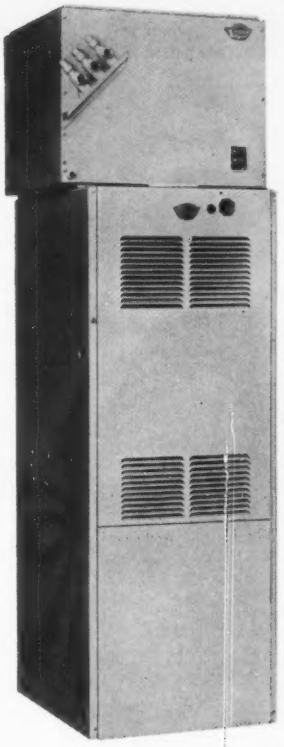
A "Vip" cartoon shows home owners some of the pitfalls they can get into as a highly puzzled man sits inside a packing crate scratching his head and reading a book entitled "E-Z Does It."

Ronald N. Campbell, Bryant general manager, says: "The man who tries to install his own furnace is likely to misgauge the heating load, install the wrong size ducts, and set up draft and noise conditions that a regular dealer knows how to handle only from experience. Those are just a few of the things the amateur can ruin, not to mention the safety angle."

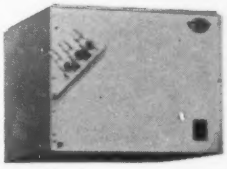
simple addition for air conditioning profits



REFRIGERATION
(condensing) UNIT
INSTALLS OUTSIDE HOUSE



AN UPRIGHT FURNACE WITH
EVAPORATOR ON TOP



COOLING
(evaporator) COIL
INSTALLS ON TOP OF FURNACE

Utility Weatheramic remote air cooled systems

Every home with any make of forced air furnace is a prospect for Utility's remote air cooled air conditioning units. They're easy to sell because they're economical and easy to install because they come with ⅝" pre-charged lines and tubing in 20 to 50-foot lengths.

Featuring extra-large blowers for greater cooling capacity, the condensing units come in Economy 2-ton, 2-ton, 3-ton and 5-ton sizes.

The evaporator units in 2, 3 and 5-ton sizes contain double (A-type) oversize evaporation coils adaptable to upflow and counterflow type furnaces.

Single coils for horizontal application in attic, basement or crawl space are also available.

Utility remote air cooled units are adaptable to all upright, horizontal and counter-flow forced air furnaces With factory prewiring and other simplified installation features, you can add greater air conditioning profits by using Utility Weatheramic units.

Write for catalog data.

Weatheramic LINE UTILITY

FORCED AIR FURNACES/AIR CONDITIONERS

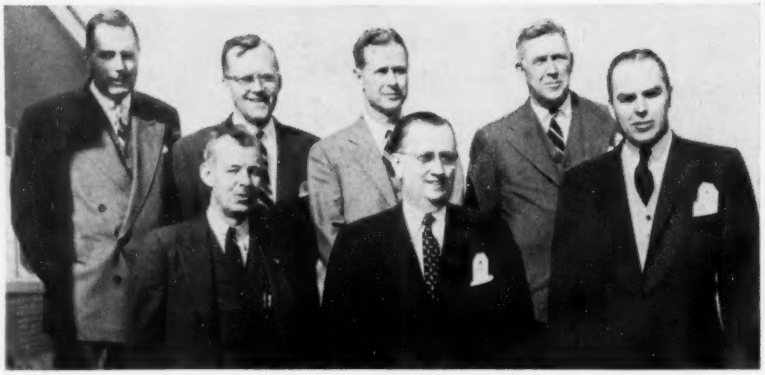
UTILITY APPLIANCE CORP.:
Manufacturers of Utility Furnaces, Air Coolers, Air Conditioners, Water Heaters and Gaffers & Sattler and Occidental Gas Ranges

UTILITY APPLIANCE CORP. 4851 south alameda street, los angeles 58, californie
Export Division: 141 So. El Camino Drive, Beverly Hills, Calif., Cable: UTILIFAN, Los Angeles

Canadian Meter Co. opens Manufacturing facility

The official opening of Canadian Meter Co. Ltd.'s new manufacturing facility was marked by a formal dedication and open-house in Milton, Ont., Canada. Designed to manufacture displacement gas meters and other measurement and control equipment to serve all Canadian requirements, the new factory is strategically located to permit fast delivery and easy service.

Officials of both Canadian Meter and its parent company, American Meter, attended the open-house to be host to groups of representatives of many Canadian public utilities, as well as local and provincial governmental officials.



At the office entrance of the new Canadian Meter Co. plant are (front row left to right) P. W. Geldard, president, Canadian Gas Association, A. McBeath, controller, American Meter Co., J. W. Ostler, general manager, Canadian Meter Co.; back row, W. H. Dalton, general manager, Canadian Gas Association, W. B. Ashby, secretary, W. G. Hamilton, Jr., president, and C. B. Dushane Jr., vice-president—sales, American Meter Co.

$$ EXTRA DOLLARS
MOTOR FUEL
PATENTED
SATELLITE
• Capture Those Highway $ $ $ $ $
• Eye Appeal - Compact - Designed to Solve Space Problem
• A.S.M.E. Code Constructed — Quality Workmanship
• Delivered Complete
Write Today for Additional Information on "IMCO" Products.
IMCO
INDUSTRIAL MFG .CO. of TEXAS INC.
SWEETWATER, TEXAS • BOX 698 • PHONE 4862

Oregon Natural Gas is a dealer for Ensign

The Oregon Natural Gas Heating Inc., Portland. Ore., has been appointed as an authorized Ensign dealer for Oregon and southern Washington.

Oregon Natural Gas Heating Inc. was recently formed by Ben J. Wheeler and E. G. Carey.

Mr. Carey was formerly connected with Gas Heat Inc., Portland, and is well known in the field of carburetion.

A complete stock of L. P. and natural gas carburetion and repair parts is maintained and it is felt that this company will be able to assist dealers in many ways in programs of L. P. or natural gas conversions.

Home Improvement plant will continue to mid-'57

Operation Home Improvement, the all-industry-wide campaign to improve America's homes, originally scheduled to run to the end of this year, will continue to mid-1957.

The eagle and home seal, used to identify the tie-in promotional campaign during 1956, will be the same except for a slogan change.

Dearborn PROUDLY PRESENTS ITS *all-new* UNVENTED WALL HEATER

Designed by Dearborn . . manufactured by Dearborn . . with the built-in Dearborn quality you have known for years, this all-new UNVENTED wall heater has features you can sell because it has the features your customers want!

You Can Sell . . .

- Quick, simple installation – it hangs *on* the wall
- Safety and convenience of its Cool Safety Cabinet
- Specially designed, super-efficient burner
- Fully visible flame
- Comfort-making forward heat flow
- Completely enclosed controls – *more* safety by Dearborn
- Combustion chamber and baffles made of Black Beauty steel
- Beautiful styling – finished in smart Dearborn coppertone
- Takes *no* floor space – little wall space
- Competitively priced

SEND TODAY FOR ADDITIONAL INFORMATION ON THIS NEW DEARBORN PROFIT-MAKER

48" high, 20" wide, only 6 ½" deep. Burns any type gas . . uses any operating and temperature control available on Dearborn's regular line of space heaters.

Dollar-wise . . it's

Dearborn®

1700 W. COMMERCE • DALLAS, TEXAS

modern packaging For LPG PRODUCTS

Whatever type of tank desired, McNamar can meet your requirements for size, quality of workmanship, and speed of delivery.

PROPANE DOMESTIC

PROPANE AND AMMONIA STORAGE

McNamar can assure dealers not only a competitive price for a quality product, but also assistance in solving present and future financing problems.

When you deal with McNamar you are assured of immediate service. Don't lose peak season profits by waiting on tank delivery.

DELIVERY TRUCKS

McNAMAR TULSA

McNAMAR
BOILER & TANK CO.
BOX 868 • PHONE CHerry 2-6291
TULSA, OKLAHOMA

This year's slogan "'56 . . . the year to fix" will have as a 1957 substitute: "Better Your Living." Consumer advertising on the new campaign will not begin until November 1.

Success of Operation Home Improvement to date is reflected in the increase in dollar volume of remodeling permits throughout the nation. Seattle, Wash., and Oakland, Calif., pilot cities for the press-industry cooperative campaign, showed increases of 50 per cent.

The campaign affords L. P. gas dealers an opportunity to join the bandwagon and sell appliances while home improvement is in the public eye.

L. P. gas enthusiast off to Karachi, Pakistan

Trudy Springer

Industry friends of William H. Brooks will be interested to know that he is being joined in Karachi, Pakistan, by another L. P. gas enthusiast.

Trudy Springer, editorial assistant and secretary on BUTANE-PROPANE *News* and *Gas* magazines for the past five years, left last month for Karachi where she will work as administrative assistant to Mr. Brooks.

Mr. Brooks, who formerly served as Washington representative of the LPG tank fabricators, is now trade and investment advisor there with the International Cooperation Administration, United States Operations Mission to Pakistan.

Servel Inc. introduces "school sales plan"

A "school sales plan" has been presented to utility companies by Servel Inc. as a program to introduce future homemakers to the conveniences and advancements of gas refrigeration.

Servel's school plan for 1956 was announced by Richard S. Testut, vice president in charge of home appliance sales.

"More than 200 gas utilities have already expressed a desire to participate in the program," said Mr. Testut, "and Servel is happy to make this outstanding school plan available. It is an important investment to help guard the kitchen

"Reznor's low operating and maintenance costs help me sell a lot of industrial and commercial heating jobs"

"I tell my prospects that Reznor gas unit heaters are their best buy. And they pay attention to what I say, because I can show them why Reznor costs less to begin with and still costs less next year and ten years from now. Sure, they like the idea of Reznor's low initial cost and low installation cost, but their eyes really pop when I compare the cost of operating and maintaining Reznor heaters with that of other equipment they have been considering.

"I show them why fuel costs are low . . . because Reznor heat is instant heat, on-the-spot heat. Reznor heat is produced only when and where heat is needed. I point out to them that because each Reznor heater operates independently, they can heat different areas in their buildings to different temperatures or heat only the part of the building that's in use. I tell them that there's no labor costs. No boilers to fire . . . no ashes to haul. And I point out that maintenance is a simple matter of once-a-year cleaning.

"I talk real dollars and cents savings; that's the kind of talk that sells store owners, factory managers and other businessmen. And once they're sold on the advantages of gas unit heating it's easy to sell them on Reznor. I find that Reznor is the one name in unit heating that my commercial and industrial heating prospects all know and accept."

The story is the same all over the country. Reznor gas unit heating is easy to sell because the system has so many saleable advantages and because heating prospects recognize Reznor as the top brand in unit heating. Your volume of possible commercial and industrial heating jobs will start to climb as soon as you offer your prospects Reznor gas unit heaters. Call your nearby Reznor distributor today for all the details. You'll find him listed under "Heaters-Unit" in the yellow pages of your telephone directory.

REZNOR
THE WORLD'S LARGEST-SELLING GAS UNIT HEATERS
REZNOR MANUFACTURING COMPANY
4 Union Street, Mercer, Pa.

gas load by making future customers for gas."

The plan covers all Servel gas refrigerators sold for use in home economics or other academic departments of educational institutions, including junior high schools, high schools, colleges and universities.

The plan provides for factory cooperation with gas utilities in a two-step program:

1. The initial installation of gas refrigerators will be sold to the school at a special low price.

2. Every two years the refrigerator will be replaced with the latest current models at no additional cost to the school (unless larger or more deluxe models are selected).

Canada firm plans bulk propane storage plant

Northern Propane Gas Co. Ltd., with head office in Fort William, Ont., Canada, under managership of D. E. McIntosh, is starting immediate construction of a new bulk propane storage plant at Longlac to serve the Longlac area, Manitouwadge and the Kapuskasing area. The announcement was made June 12 by N. A. Hampton, consultant for the company.

This is another step in the company's plan to expand throughout Ontario, Mr. Hampton said. A short time ago the company bought out Propane Services Ltd. of Fort Frances. All sections of Northern Ontario will be covered by the Northern Propane Gas Co.

Cost of the construction of the plant at Longlac will be $65,000.

Neil R. Regeimbal, new BPN Washington man

N. R. Regeimbal

Neil R. Regeimbal, Washington correspondent for BUTANE-PROPANE *News*, has lived in the Washington, D. C., area for 25 years.

An experienced newspaper reporter, Mr. Regeimbal began his career in the Washington Bureau of the Associated Press while still a student at Maryland University. He was graduated in 1951 with an A. B. in Journalism, and became Associate Editor of the Takoma (Md.) *Journal*.

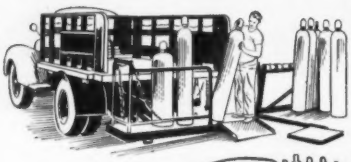
Two years later, Mr. Regeimbal went with the Washington (D. C.) *Times-Herald* as a reporter covering all phases of government and business in nearby Montgomery County, Md., one of the wealthiest counties in the nation. He became a member of the staff of the Washington *Post and Times-Herald* when the two papers were merged. In May, 1954, he joined the Washington staff of the Chilton Publications.

Petrolane plays host to more than 50 L. P. gas men

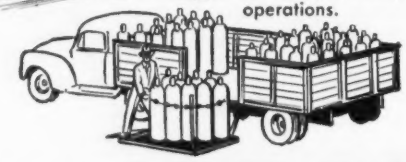
Petrolane Gas Service Inc., Long Beach, Calif., were hosts to more than 50 L. P. gas servicemen from California and Nevada for Petrolane's annual appliance service school, May 18-19.

The students who attended the two-day service school were taught the latest methods of trouble shooting, pipe sizing, and repairing all types of L. P. gas controls, equipment and appliances. The instructors for the school were service

Here's trucking *AUTOMATION* that lets you combat High Cost Hauling

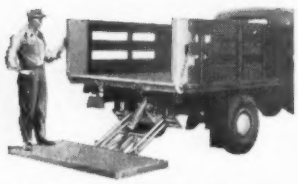


Cost saving way to handle such items as *bottled air* and *gas*, and *appliances*, etc. A Lift gate installed on one or both sides or end of semi-trailers or the end of ¾-ton and heavier trucks gives great flexibility to many pickup and delivery operations.

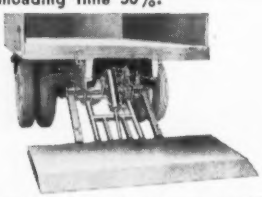


ANTHONY LIFT GATES

FOR ¾ TON and Larger Trucks and Semi-Trailers



Model No. 144 handles loads up to 1000 lbs. Cuts loading and unloading time 50%.



Model No. 145 handles up to 2000 lbs. on 1½-Ton and larger trucks and semi-trailers.

Model No. 146 handles up to 4000 lbs. on heavy trucks and semi-trailers.

If high freight rates and costly delivery services are cutting a swath out of your profit picture, here are five ways you can offset them.

1. Speed up deliveries.
2. Develop faster, easier ways of loading and unloading trucks.
3. Systematize handling of bulky, awkward, heavy shipments.
4. Prevent damage to goods, yet make it easier and safer for drivers to handle most shipments alone.
5. Help drivers contribute to the satisfaction of the receiver.

All of these advantages are yours when you install Lift Gates on your trucks. We will be glad to recommend the systems, the size and type of Gate best suited for your work.

Write, wire or call us today—no obligation. One of our representatives is nearby.

ANTHONY LIFT GATE HYDRAULIC

ANTHONY COMPANY
Streator, Illinois

RED BRUMIT SAYS

Let's be Basic . . .

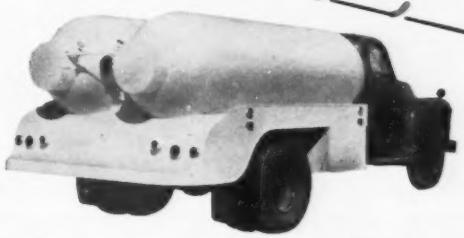
3 essentials

MATERIAL
MEN
KNOW-HOW

} A Good Product

It takes all three of these to produce *any* kind of product . . . BUT the quality of the product depends on the degree of quality of each of the three ingredients. The best MATERIAL, which we use, of course, is available to all who would pay its price. MANPOWER is also available to all. Yet our manpower is trained for our specific problems . . . schooled to the point of real craftsmanship. KNOW-HOW, real know-how, cannot be bought. It is acquired mostly through years of experience. The know-how at Dal-Worth is backed by 32 years' successful experience.

You can bring ALL your tank needs to Dal-Worth in complete confidence knowing that they will receive the best in each of these basic ingredients. QUALITY MATERIALS . . . REAL CRAFTSMANSHIP . . . and KNOW-HOW BACKED BY YEARS OF EXPERIENCE.



There is the same advanced styling and engineering for service and economy in all our propane-butane and anhydrous ammonia tanks, such as this 1200 - 2000-gallon delivery unit with equipment installed to meet any state's specifications, or the . . .

Space-Mizer LP Gas Dispenser; 1000, 2000 or 3000 WG capacity; completely self-contained with choice of equipment and colors. This is the ideal unit for service stations, fleet operators and LP gas dealers.

CERTIFIED CONSTRUCTION
DAL-WORTH TANK CO.

DAL-WORTH
TANK COMPANY

W. G. (RED) BRUMIT, OWNER

A KNOW-HOW BACKED BY 32 YEARS OF EXPERIENCE

BOX 818 GRAND PRAIRIE, TEXAS

FIELD TESTS PROVE IT . . .

You'll make more furnace sales—faster—with this new Rheem Sales Album

HERE'S WHY: *First,* it's a clear-cut, logical selling story on Rheem's complete line of gas and oil furnaces and complete home air conditioning. It's written the way you want it—because heating contractors, just like yourself, helped write it.

Second, it puts all the emphasis on you. (Rheem takes second billing.) From the opening page, this new sales presentation establishes you as a reputable dealer, well qualified to handle all of your customer's heating problems.

Third, it's a non-technical presentation that's easily understood. Because the purchase of a new furnace is usually a joint decision by husband *and* wife, it's written to hold the interest and attention of both. It helps the lady of the house understand how important a good furnace is.

WE KNOW IT WILL WORK FOR YOU! Field tests have proved it! Heating contractors using the Rheem book have not only shown more actual orders—but orders for more profitable heating and air-conditioning jobs! It can do the same for you.

This "silent salesman" can't become outdated. As new material is developed, dealers will be supplied with new sets of pages.

Put it to work for you. It covers Rheem's complete line of Highboy, Lowboy, Forced Air, Counterflow and Gravity type furnaces. There's a Rheem model and size to fit every requirement. See your Rheem wholesaler now, and get a head-start on bigger sales, and better sales with this great new Rheem Sales Album.

RELY ON RHEEM MANUFACTURING COMPANY Rheem FOR BETTER PRODUCTS—BIGGER PROFITS

SEATTLE • HOUSTON • CHICAGO • SOUTH GATE, CALIFORNIA • SPARROW'S POINT, MARYLAND

specialists from General Controls, Minneapolis - Honeywell, Robertshaw-Fulton, General Water Heater Co., Wedgewood division, Rheem Corp., Servel Inc., and Selwyn-Pacific.

Robertshaw-Fulton expands Cleveland office

The Cleveland office of Robertshaw-Fulton Controls Co. has moved into new, larger quarters at 6116 St. Clair Ave.

The company's Cleveland district serves manufacturers of ranges and other cooking appliances in a territory that includes northern Ohio, western Pennsylvania, western New York, and West Virginia; and manufacturers of heating appliances in Ohio, Kentucky, West Virginia, western Pennsylvania and western New York.

Gas Appliance Co. opens new facilities

The new location of Gas Appliance Co., Inc., at 2431 Clio St., New Orleans 13, La., was announced recently by T. J. Bender, vice president and manager.

First located on Carondelet St., Gas Appliance served local plumbers, contractors and appliance dealers for several years. At the end of World War II the corporation moved to 813 Howard Ave. and expanded operations to include the entire South and Southeast, and parts of the Middle Atlantic States.

With over 15,000 sq ft of warehouse space, a large stock of merchandise is made available for immediate delivery.

This move enables the company to serve local dealers and surrounding territory more efficiently as they have more warehouse space and a large modern air conditioned showroom.

A. O. Smith adds more than 25 new distributors

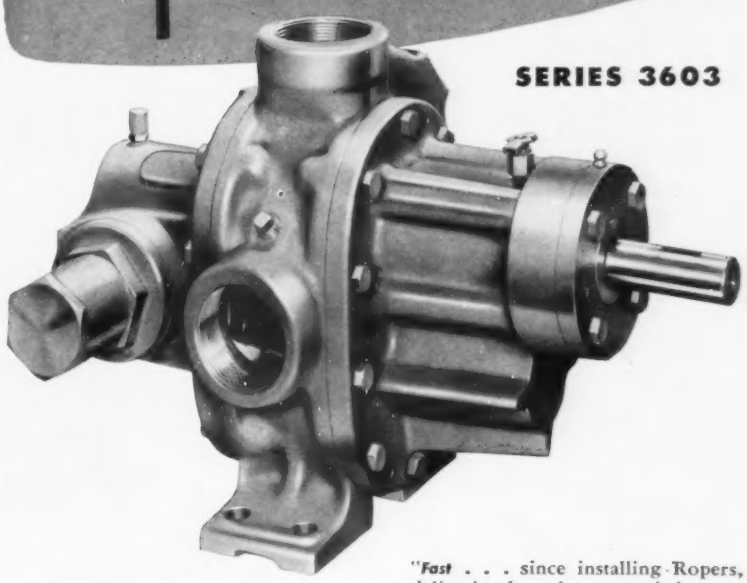
More than 25 new companies have been added nationally to the distributor family of the A. O. Smith Corp.'s Permaglas division, Kankakee, Ill. These involve distributors of Permaglas domestic water heaters and Burkey commercial water heaters as well as wholesalers of the firm's home heating and air conditioning products. Segregated by product lines, the additions in 1956 are:

All products: Forest City Elec-

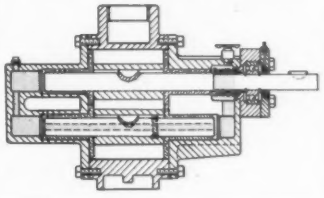
BETTER SERVICE...
BETTER SERVICE LIFE

ROPER L-P PUMPS

SERIES 3603



QUICK, POSITIVE MAINTENANCE



ROPER SINGLE-POINT PRESSURE-LUBE SYSTEM

Complete lubrication of main bearing is assured through Roper single-point pressure-lube system. This simplified lubricating method saves time, effort, and material . . . eliminates fuss and bother.

"*Fast* . . . since installing Ropers, deliveries have been speeded up to take care of more calls per day."

"*Quiet* . . . customers aren't bothered by annoying noise with Ropers . . . we can even make night deliveries without disturbing anyone."

"*Economical* . . . our Roper 30 G.P.M. units reach rated capacity quickly at medium idle . . . no racing the motor to get results!" These are the reports of L-P marketers who *know*, for Ropers give them *better service* day in and day out.

If you want to effect greater economies and more profitable delivery like others, look to Roper for the answer to L-P Gas pumping needs. Ask your distributor for more facts and performance data, or write for Bulletin No. 24 which outlines capacities, features and specifications.

TANK TRUCK AND BULK PLANT PUMPS
FOR 30, 50, AND 100 G.P.M. DELIVERY SYSTEMS

GEO. D. ROPER CORPORATION
358 BLACKHAWK PARK AVENUE
ROCKFORD, ILLINOIS

ROPER Rotary Pumps

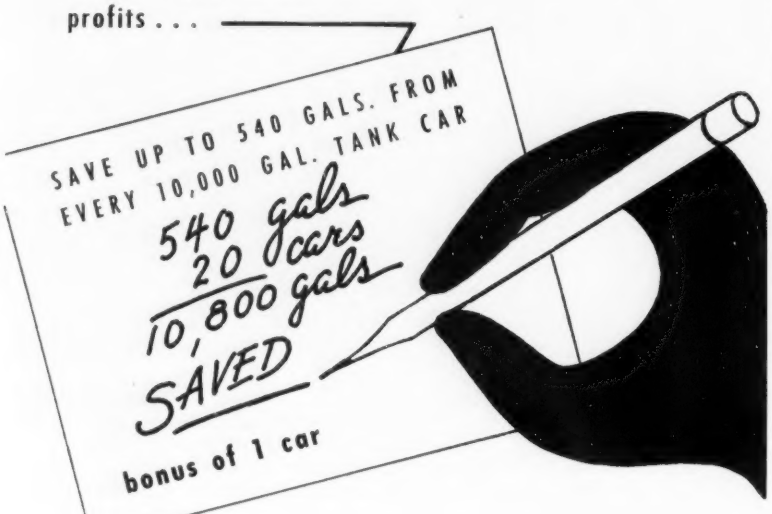
tric Supply Co., Rockford, Ill.; Northwest Oil & Equipment Co., Moorhead, Minn.; Bush Supply Co. of Harlingen and McAllen, Texas; Service Supply Co., Victoria, Texas.

Water heater distributors: Mainline Supply Co. Inc., Dayton, Ohio; Booth & Thomas, Springfield, Ill.; Sam Klain & Son, Indianapolis, Ind., and Paul Mueller Co., Springfield, Mo.

Heating wholesalers: Mytelka & Rose Inc., Newark, N. J.; Gas Heat Distributors Inc., Charlotte, N. C.; Savannah Refrigeration Supply Inc., Savannah, Ga.; N. B. Handy Co., Lynchburg, Va.; Sales Eastern Corp. Inc., Richmond, Va.; George E. Bagwell Co., Montgomery, Ala.; Excelsion Heater & Supply Division, St. Paul, Minn.; A. G. Brauer Supply Co., St. Louis, Mo.; Heaven Engineering Co., Kansas City, Mo.; Electrical & Mechanical Supply Co. Inc., El Paso, Texas; Southern Wholesalers Inc., Jackson, Miss.; Model Plumbing Supply Co., Los Angeles, Calif; Ventilating Equipment Co., Los Angeles, Calif.; Pease-Briggs Co., San Leandro, Calif.; Ware McClelland Co., Phoenix, Ariz.; Southwest Supply Co., San Diego, Calif., and S. & S. Supply Co., San Jose, Calif.

Selected as the representative homemaker of the nation, May 12, at Daytona Beach, Fla., a new Mrs. America (Mrs. Cleo Maletis, Portland, Ore.) counted among her prizes a new RCA Whirlpool Imperial Super Speed gas clothes dryer (left) and matching Imperial automatic washer.

Simple arithmetic proves you can increase your LPG profits . . .



with a BRUNNER SINCE 1908

LP GAS TRANSFER UNIT

BRUNNER LPG UNITS are available in 5, 7½ and 10 H.P. models . . . easy to install and service.

No liquid pump can give you such savings! The Brunner LPG Unit not only transfers all liquid to your storage tank — but also removes and liquefies the gas vapors from the tank car. It pays for itself in a short time.

WRITE FOR FREE BOOKLET

Shows how to set up an efficient storage transfer system . . . tells all about safety and long-life features of Brunner LPG Units.

PROVEN QUALITY 50th Anniversary BRUNNER SINCE 1908 DEPENDABLE

BRUNNER MANUFACTURING COMPANY, UTICA, N. Y.

The Brunner Co., Gainesville, Ga.

In Canada: Brunner Corp. (Canada) Ltd., Toronto, Ontario

Pure Gas opens bulk plant distribution point

The opening of a new bulk plant distribution point at Douglas, Wyo., effective June 1, has been announced by the Pure Gas Service Co., with general offices in Worland, Wyo.

Puregas, in metered, bulk and bottled gas, will be offered. Ray Dimmick, will be the distributor of Puregas in this newest location.

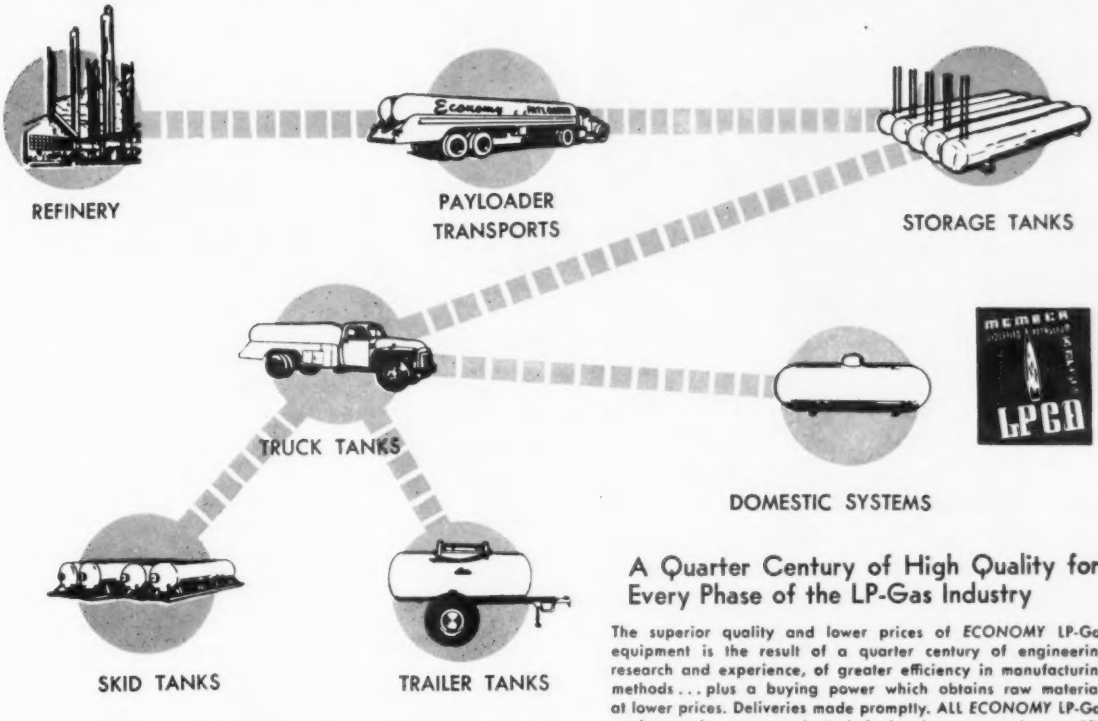
Francisco named president of Fuelane Corp., N. Y.

Charles M. Francisco was elected president of Fuelane Corp. at its annual meeting held in June. Mr. Francisco was formerly executive vice president and treasurer. Roy R. Johnson was reelected vice president and Leonard T. Osterhout, secretary - treasurer. Mr. Osterhout

Okay . . . I WILL say it again . . .

TANKS BY BANKS

Economy L-P GAS EQUIPMENT Means GREATER PAYLOAD PROFITS!



A Quarter Century of High Quality for Every Phase of the LP-Gas Industry

The superior quality and lower prices of ECONOMY LP-Gas equipment is the result of a quarter century of engineering research and experience, of greater efficiency in manufacturing methods . . . plus a buying power which obtains raw materials at lower prices. Deliveries made promptly. ALL ECONOMY LP-Gas equipment is guaranteed. And that's why more and more LPG dealers, coast-to-coast, are saying: "ECONOMY LP-GAS EQUIPMENT Means GREATER Payload PROFITS!"

— SPECIAL STEEL FABRICATION OF ALL TYPES —

Let Our Engineering Department Help With Your LPG Problems

Financing Available For Approved Dealers

DALLAS TANK COMPANY, INC.

Quality tanks for a quarter century

201-5 West Commerce Street, Dallas, Texas
Phone Riverside 5001

409 Lee Street, Vicksburg, Mississippi
Phone 2971

was formerly secretary-controller.

The following were elected members of the board of directors: Charles M. Francisco, Roy R. Johnson, A. Raymond Atkins, Clyde A. Street, A. Burton Prettyman, Leonard T. Osterhout, and J. Fred Ackerly.

General Controls holds open house in new building

Commemorating 26 years in the Bay Area, General Controls Co., on May 28, held open house in a new building, recently completed at 600 Bryant St., San Francisco, that increases their Bay Area facilities by 120 per cent.

An automatic bar, which dispenses a mixed drink in three seconds, was a highlight of the reception and open house given May 28 in San Francisco by General Controls Co. to dedicate its new warehouse and shownroom building. J. F. Ray (left), vice president in charge of sales for General Controls; Robert Tuck, vice president of Atlas Heating Co., and Robert Lees, vice president of H. R. Basford Co., enjoy the $4000 bar which was constructed by GC to demonstrate the effectiveness of its automatic controls.

Centrally located at the Fourth St. down-ramp from the bridge approach, the showroom and warehouse are of modern, functional design. Encompassing 4400 sq ft, with office quarters located on a level above the driveway, the building provides test facilities and adjustable-size rooms for service schools and sales meetings.

National Council offers competitive advertising

Under a bold headline of "The Truth," the National LP-Gas Council offers its marketer members some competitive fuel copy for local newspaper advertising.

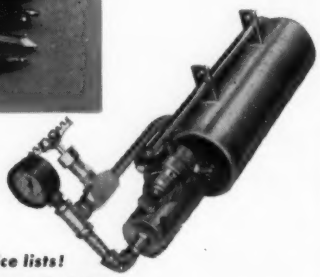
The advertisement was professionally prepared and designed for use by L. P. gas dealers who want to take concrete action against GE "faster than gas" claims.

Mats of the ad are available to Council members in either three or four column sizes at a cost of $1.00 each. They can be obtained by writing to the National LP-Gas Council, 185 N. Wabash Ave., Chicago 1, Ill.

the RANSOME LINE

The Complete Line...

of HIGH QUALITY LP-Gas Torches Burners, Furnaces and Portable Outfits ...for all commercial and industrial applications.



THE RANSOME No. LB40R
Liquid Vaporizing Burner

Write TODAY, for catalog and price lists!

RANSOME COMPANY
Liquefied Petroleum Gas Division
51 ROOM A8, 4030 HOLLIS ST., EMERYVILLE, CALIFORNIA

Ransome

NEW

DIGS 2" TRENCHES TO 18"

Perfect for digging LP gas lines, for lawn sprinkler systems, etc.

Model B "Baby" DITCH WITCH

18" - deep trenches dug at 8' per minute in normal soils —

A small, light weight, forward-moving machine which cuts sharp, clean, spoils-free trenches only 2" wide. Powered by a 2.5 HP engine — only 25-30 lb. pressure is needed for an 8" trench in average soil. When harder digging is encountered, the trencher may be moved forward by the simple hand winch attached to the handle bar. Try the Model B "Baby" on your next job.

Digs Ditches Which Can't Be Dug By Hand 2"

Sharp, Even Trenches Are Clean, Spoils-Free 2"

Digs Straight, Curved or Cornered Trenches 2"

"Years Ahead" Digs Better, Faster, Cheaper and Narrow 2"

B-18 digs to 18" depth (adjustable at 2" intervals) in most soil conditions — even frozen and rocky soil. Weighs only 175 lbs. **$445.00**

B-12 same identical machine but with 12" bucket line. Weighs only 150 lbs. **$395.00**

Compact, light weight.

Overall size: 24" wide; 36" high; 51" long.

Fits into most auto trunks (with trunk lid left open).

A child can operate Model B.

RUGGED! This sand rock shows rugged cutting power of Model B's teeth. DITCH WITCH trenchers are built for rough digging all day long.

Move forward with a Model B "Baby."

New illustrated data bulletin on request.

2" x 10" semi-pneumatic tires won't mar well-groomed lawns and terraces.

Order Your Model B From Your Equipment Distributor.

THE CHARLES MACHINE WORKS
P. O. Box 66 PERRY, OKLAHOMA Phone: 404

Unbeatable

for fast, clean pipe or conduit cutting . . .

7 models for ⅛" to 6" pipe and conduit

efficiency-balanced

RIDGID

Heavy-Duty

Pipe Cutter

It's a tool that knows its business, that comes to your hands like an old friend. It rolls easily through any pipe or conduit, scarcely a trace of burr. Strongly built, guaranteed not to warp or break, always tracks perfectly. Thin-blade or heavy-duty cutter wheels (special wheels for stainless or cast iron). For pipe or conduit cutting that's a satisfaction, buy RIDGID's at your Supply House.

RIDGID

4-WHEEL

for easy cutting in tight places

RIDGID

Work-Saver Pipe Tools

The Ridge Tool Company, Elyria, Ohio, U. S. A.

BPN

associations

East Central District names Brown secretary

Moylan Brown

Moylan E. Brown, Harrisburg, Pa., has been appointed district secretary for LPGA's East Central District, with office headquarters in Harrisburg. He succeeds William H. Plank, who resigned on March 15 of this year.

Mr. Brown's past business experience includes merchandising and sales management for two business firms in the east coast area and immediately prior to coming with LPGA he was associated with a nationally known life insurance company.

His district includes New York, New Jersey, Pennsylvania, Maryland, Delaware, West Virginia, Virginia, and Washington, D. C. He began his duties on June 4.

Steel shortage main topic of Tank Manufacturers

Formulation of plans to secure more steel plate for LPG systems and storage tanks during the critical steel shortage was the main item of business discussed at the spring meeting of the National Tank Manufacturers Association held in Shreveport, May 18 and 19.

C. J. Bender, Trinity Steel Co., Dallas, serves as president of the Association. W. M. Wattman, Anco Manufacturing & Supply Co., Tulsa, is secretary-treasurer. Forty representatives of tank manufacturers attended the conference.

Several constructive suggestions were made to improve steel shortages in the LPG industry and for securing additional tonnage. F. T. Carpenter, United Petroleum Gas

"PERFECTION'S"

Heavy Lifting Lugs...

Provide Better Balance And Ease Of Handling!

When you sell a BS&B "PERFECTION" Propane System to your customer, you are giving him a unit that has been engineered and manufactured to the highest quality standards throughout . . . one that is as nearly perfect in every *detail* as it is possible to make.

A good example of this attention to detail is the placement of the heavy lifting lugs far out on the heads of the tank for better balance and ease of handling. Other important features are the sturdy one-piece steel channel wrap around legs, the optional spray fill adapter which allows capacity filling of the tank without vapor return line, the recessed internal relief valve for maximum safety, and the one-piece quick-opening weatherproof dome.

Why not standardize this year on the one propane system that has *everything* your customers want and need— BS&B "PERFECTION" . . . with the Golden Dome!

LISTED UNDER REEXAMINATION SERVICE OF UNDERWRITERS' LABORATORIES, INC. UL

U W

EFFICIENCY OVER 60 YEARS BS&B RELIABILITY ANOTHER EXAMPLE OF PRODUCT LEADERSHIP

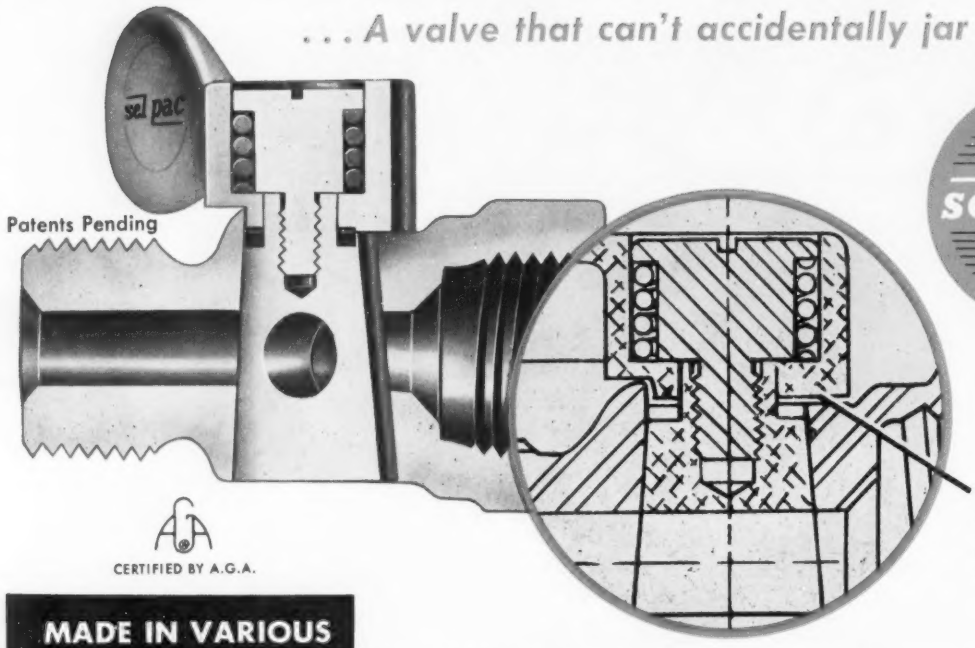
BLACK, SIVALLS & BRYSON, INC.

Propane Equipment Division, Dept. 6-AB8

7500 East 12th Street Kansas City 26, Missouri

MOST IMPORTANT DEVELOPMENT IN LP-GAS SHUT OFF VALVES IN YEARS

. . . A valve that can't accidentally jar off its seat

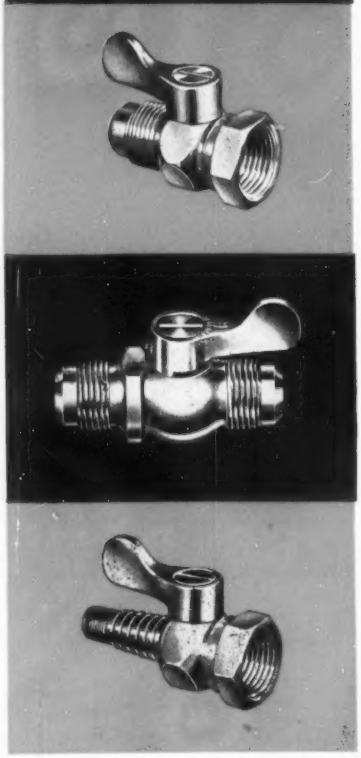


sel-pac

CERTIFIED BY A.G.A.

HANDLE RESTS ON BODY ABSORBING SHOCK THUS PREVENTING DISLODGMENT OF PLUG

MADE IN VARIOUS STYLES and SIZES
CONSULT YOUR LOCAL SEL-PAC DEALER.

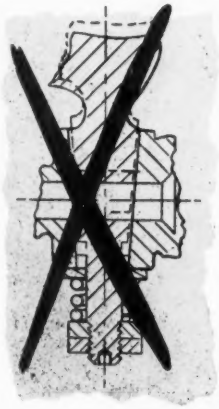


Here's a new low pressure gas shut-off valve so designed that external forces which would dislodge the tapered plug of ordinary valves, causing leakage, are no longer a problem.

The tapered plug inserted from the bottom is held securely in position at the top and locked to prevent axial movement and leakage. A combination cap and spring device, not only keeps the plug tightly seated on the taper but affords a protective housing around the spring as a safe guard against accidental dislodgment of plug.

The spring take-up, contained within the head, maintains a consistent tightness on the valve taper providing an automatic take-up for wear.

This new Sel-Pac valve, relatively small in size because of its steel construction, is several times stronger than conventional brass valves and will readily adapt itself to installation within limited space. The plug itself is bronze to provide dissimilar metal bearing surfaces. This Sel-Pac product carries AGA certification and is approved by leading building and heating codes. Each valve is individually tested and carefully packaged.



OLD WAY

PLUG MAY BE DISLODGED BY A FORCE ON THE BOTTOM AS INDICATED BY DOTTED LINES.

SELWYN-PACIFIC COMPANY

340 WEST AVENUE 26, LOS ANGELES 31, CALIFORNIA

MEMBER

(Advertisement)

DON'T LEARN SAFETY ACCIDENTALLY

by
GEORGE R. POSTLEWAIT
President
SELWYN-PACIFIC COMPANY

The words, "Common Sense" and "Safety" may have little relationship in the design and manufacture of ladies hats, but they certainly are synonymous as related to our LP-Gas Industry. Safety can come only from (1) a full knowledge and understanding of the product with which we are dealing and (2) the use of common sense in the application of these facts.

I recently witnessed an LP installation, where one or the other of the two above points was lacking. It consisted of a beautifully installed 250,000 B.T.U. boiler setup — using 2 stage regulation, sample tanks to provide storage and vaporization of the cold winter temperatures encountered. The second stage regulator was installed within the building. All of the above indicates knowledge of the product and good installation practice. The "Boner" appeared when I discovered the installation man had run a vent line from the regulator relief vent into the flue of the furnace, instead of piping it outside the building to a safe discharge location.

Knowing that LP-Gas is heavier than air, he overlooked the serious results that might have occurred had the regulator relief discharged a lot of raw fuel in the flue some 6 feet above the open flame of the pilot light. He was very appreciative of having this little fact called to his attention and made an immediate change.

A second "Boner" I heard of, in another part of the country, didn't work out so easily. After an explosion and fire, it was proven in court that a branch line on an LP installation had been left with a globe valve at the end of the unconnected line. The globe valve was suitable for the line, but the installation man had not bothered to put a pipe plug in the downstream side of the valve. Children playing in the basement opened the valve. Had the valve been plugged, the accident would have been avoided.

For an excellent treatise on Safety we suggest you obtain Pamphlets 52 and 58 from the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

Don't learn Safety, accidentally.

SELWYN-PACIFIC COMPANY
340 West Avenue 26
Los Angeles 31, California

Co.; J. L. Tullis, J. B. Beaird Co., Inc.; A. J. Hall, Burnham Corp., and B. R. Sprayberry, Texas Boiler & Machinery Co., participated in the panel discussion on this subject.

R. W. Creamer, Creamer & Dunlap, Inc.; B. C. Doggett, J. B. Beaird Co., Inc., and Ed H. Gill, Mississippi Tank Co., brought reports on the "Use of T-1 Steel for Transport Tanks in the LPG Industry." A. W. Crowley, McNamar & Crowley, Inc., presented a report pertaining to the tank fabricators section meeting held in Chicago during the national LPGA convention.

Lagrange elected pres. of Louisiana Institute

A new slate of officers, a record attendance and top flight industry speakers highlighted the annual state convention of The Butane-Propane Institute of Louisiana in New Orleans, June 3-5.

Victor E. Lagrange, president of Home Gas & Fuel, Lake Charles, was chosen new president of the dealer association. He succeeds Baxter O. Deal, Lake Providence. Other officers elected were I. W. Patterson, General Gas Corp., Baton Rouge, vice president; J. C. Chenevert, Central Louisiana Gas Corp., Alexandria, reelected secretary; and W. C. Bogan, Peoples Butane Gas Co., Denham Springs, reelected treasurer.

The new directors are E. R. McCormick, John O'Neal, Cosma Olivier, Quentin Jones and F. J. Roberson.

Some 120 dealers, suppliers and wives gathered for the three days of speeches, dealer meetings and entertainment. Speaker Sidney L. Stapleton, general manager of West Florida Gas & Fuel Co., Panama City, Fla., called for dealers to recognize that "the most important person in any business is the customer. Our ultimate success is measured not by the new customers we add on, but by the customers we keep," he said.

Louie E. Throgmorton, vice president of public services for Republic National Life Insurance Co., Dallas, urged the dealers to participate more in their local community activities. He said the dealers owe it to their neighbors and to the community as a whole to attempt to put something back into the community in which they make a living.

Another featured speaker, William J. Lawson, executive secretary of the Texas Butane Dealers Association, gave dealers a preview of "The New Look in Dealer Associations." He stressed the need for more group conferences with honest sincere discussions of industry problems by all dealers. He said also, ". . . it will behoove the refiner and marketer to work more closely with the dealers in the future who are striving to develop a profitable retail market through better business practices."

The closing speaker, John E. Parsons, vice president of LPG-Credit Corp. in Cleveland, Ohio, proposed to dealers that they form a dealers finance council which would work in cooperation with

New officers of the Butane-Propane Institute of Louisiana are (from left) Victor E. Lagrange, president, I. W. Patterson, vice president, J. C. Chenevert, secretary, and W. C. Bogan, treasurer. This new slate was elected at the annual state convention held in New Orleans, June 3-5.

Butane Carter Propane

it's natural to link
LPG with Carter

In the LPG industry, CARTER and unexcelled products are naturally associated. And there's a simple reason for it: CARTER'S LPG products *are* unexcelled . . . the result of more than twenty years' experience in the manufacture of highest quality butane and propane. This experience — gained by men interested in only the best — is yours when you buy LPG from CARTER.

THE CARTER OIL COMPANY
TULSA, OKLAHOMA

Here's why you can get results from B-P News Classified Ads

Your classified ad in B-P News will be seen in 9,013 different LPG plants . . . the *only* complete coverage of your major market in the LPG industry.

Best evidence of results is the fact that for 17 consecutive years, advertisers have placed more advertising in B-P News than in any other LPG media.

Deadline for copy is the 5th of every month preceding publication month.

BUTANE-PROPANE News
198 South Alvarado St., Los Angeles 57

dealer members. This group Mr. Parsons said could study the problems of financing in a broad sense as it affects all dealers; study the financial plans available to the industry and make recommendations to the dealers as to the merits and demerits of such available financing plans and programs.

The dealers voted also an extension of their statewide public relations program. Started in June, 1955, this program has two broad purposes: (1) to promote acceptance of our respective goods and services and (2) to win public sympathy and support in dealing with a variety of problems including governmental, legislative, social and economic.

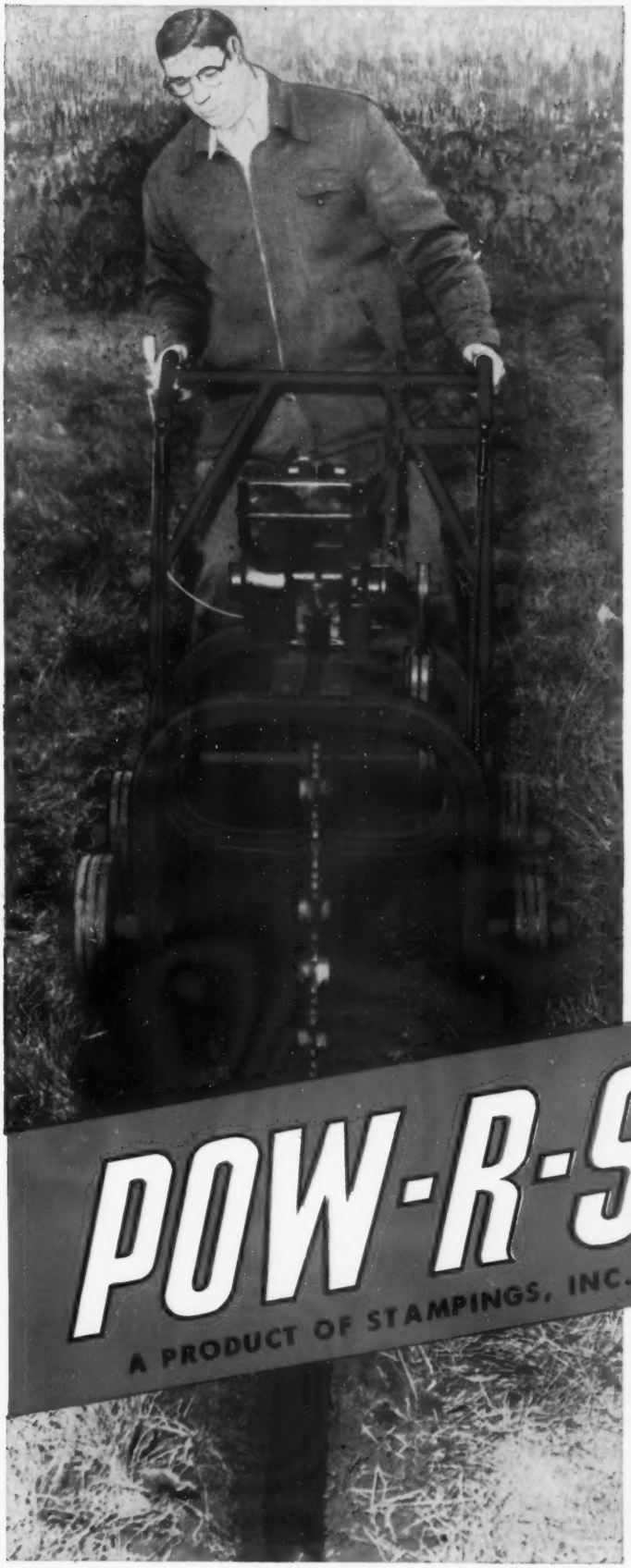
"Profits" theme of Arkansas meeting

The Arkansas L. P. Gas Association Inc., focused its entire "Seventeenth Annual Convention Program," held in Hot Springs, June 10-12 at the Arlington Hotel, on the central theme "Profits." The association will carry this same theme into district meetings in order to help lift the LPG business within the state to higher levels of success. Each address on the program featured "Profits."

Chalmer Jaynes, Skelly Oil Co., spoke on the subject of "Profits Through Business Planning." An actual warning was given the dealers that they must make the proper margin of profit if they expect to stay in business long. Picturing a number of companies who had wanted to sell out to larger companies, Mr. Jaynes said that this was due to the fact that the dealers had priced their products and services so low nothing was left after paying expenses.

Discussing profits through sales, A. B. Ritzenthaler, vice president Tappan Stove Co., chose two words on which to build his talk. The first was "Action." "Action contributes to greater profits. It is the thing that motivates thought. It calls for doing something each day to make a profit." The second word was "Excitement." "Excitement stimulates action. Nothing happens," he said, "until you get excited."

Research man, W. R. Lund, manager market research, Warren Petroleum Co., handled the sub-



NEW!...

a great labor-saving machine that reduces man-hours to minutes!

RAPIDLY DIGS A 2½ INCH WIDE TRENCH FOR PIPE AND TUBING FOR BULK INSTALLATIONS

1. **Eliminates costly, time-wasting hand digging.**
2. **Loaded, transported, unloaded at job by one man.**
3. **Designed for operation by one man. Handy controls.**
4. **Makes for a neat installation. No unsightly lawn scars.**
5. **A muscle and back saver that wins workers' co-operation. Investment rapidly repaid in time, money and morale.**
6. **Economical, safe, simple to operate. Rigid. Sturdy. Light in weight. Oil sealed bearings. 4 cycle standard gas engine.**
7. **Digs as deep as 24" at a rate that actually reduces hours to minutes.**
8. **Tested and approved by competent engineers under actual conditions. A quality product by Stampings, Inc. and so guaranteed.**

STAMPINGS
INCORPORATED

POW-R-SPADE®

A PRODUCT OF STAMPINGS, INC., DAVENPORT, IOWA

STAMPINGS, INC. Davenport, Iowa

Gentlemen: Please send me complete information about the new POW-R-SPADE that reduces man hours to minutes.

Your Name _____

Firm Name _____

Address _____

City _____ State _____

HIGH VOLUME

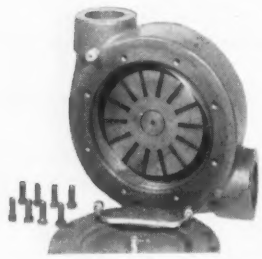
AT DIFFERENTIAL PRESSURES

UP TO 300 P.S.I.

Without Need For Vapor Return Line

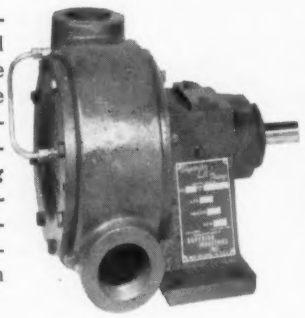
Summer is here, and you are having to work against high pressures. This is the season when the outstanding performance of "Superior" LPG Precision Rotary Pumps would really save time and money for you, by enabling you to fill tanks and cylinders faster.

This efficient pump is capable of high volume at low pump and engine speeds. It eliminates the use of vapor-hose, shortens delivery time, and lightens work. Easy to install. The base fits the average truck mounting without need for piping change. Available in 75 and 110 G.P.M. sizes. Write for descriptive folder and name of nearest Distributor.



Superior LPG PRECISION ROTARY PUMP

The compact, light-weight Superior Pump has a two-lobed cam with double pumping cycle for each revolution. Within the rotor are 14 hydrostatically balanced, pressure-activated, self-adjusting and self-lubricating carbon vanes that provide positive pumping action. No metal-to-metal contact; no wear, except on the carbon vanes which can be replaced easily.



New Model TC

SUPERIOR INDUSTRIES, INC.
1007 National Bank of Commerce Bldg.
NEW ORLEANS 12, LA.

INQUIRIES INVITED FROM DISTRIBUTORS

AGENTS WANTED

for fast-selling line

If you call on distributors, dealers or users of LP Gas and appliances, you will want to add to your line this much needed, practical group of

BRUSH TOP CANS

They are widely used throughout the industry by installation and servicemen.

Write Dept. BP-1 for details, telling us the scope of your activities.

GEO. D. ELLIS & SONS. INC. American & Luzerne Streets, Dept. BP-1, Philadelphia 40, Pa.

ject "Profits Through Consumer Attitudes." He pointed out that the Arkansas L. P. gas industry had expanded rapidly but the rate of growth had slowed considerably the last few years. He said that two things contribute to the slowing down: "First, new business isn't as easy to get and second, that the industry is encountering very aggressive competition from electricity."

Max Fetty, vice president, Delta Tank Manufacturing Co., took the subject "Profits Through Good Dealer Relations" and developed the theme that dealers should break from the general trend in selling. He pointed out that dealers who do something "creative" in selling have more zest and enthusiasm for their business.

Floyd Selim, Phillips Petroleum Co., turned his talk "Profits Through Carburetion" in the direction of the user of L. P. gas and pointed out how the customer profits from L. P. gas carburetion. He gave information and illustrations describing how engines use this fuel and how the various fuels compare.

M. L. Blair, state boiler inspector, called on the dealers to pull together in outlawing service to inferior and improperly installed systems. His talk also dealt with the new Arkansas safety regulations.

H. F. Browne and G. M. Kintz of Dallas, staged the U. S. Bureau of Mines demonstration on the "Magic of Fire" in showing how important safety is to the "Profit" program. This was their third official appearance before an Arkansas audience.

Closing sessions featured a panel discussion led by Alex S. Hill on "Profits."

New officers elected were, Roy G. Thrash, Tol-A-Tex Gas Co., Hope, president; Earl Tripp, Tripp Butane Gas Co., Batesville, 1st vice president; Tommy B. Griffen, Jr., Zero Gas, Benton, 2nd vice president; Howard E. Rogers, Rogers Butane Gas Co., Carlisle and Lonoke, treasurer.

At the annual banquet distinguished service awards were given to Jimmie Charton, Arkansas Foundry, Lewis Bowen, Harris Distributors, and Alex Hill, Blytheville Propane Gas Co.

In addition to annual Fun Night and the banquet, ladies' entertainment included scenic trips,

At last - something more than air conditioning...

"Comfort-Conditioning"

by

HOLLY

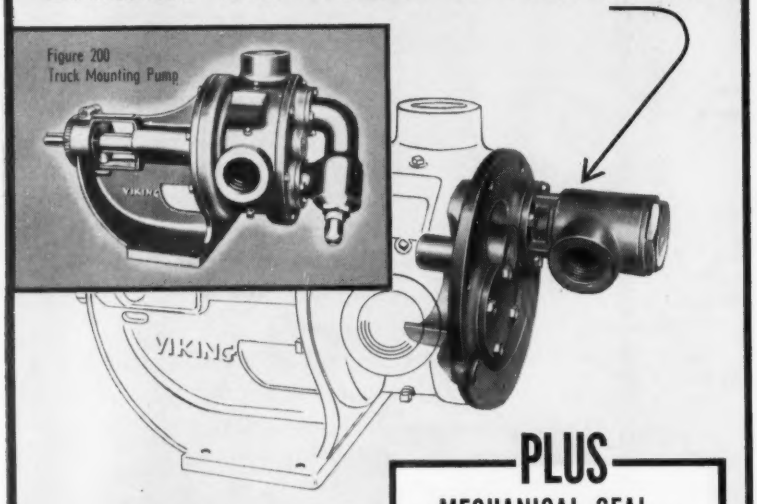
Cooling Units with the famous Holly Super-Quality are now rolling off the production lines... Combined with Holly Forced Air Furnaces, they make a highly efficient, yet completely simple system that "Comfort-Conditions" all year long... They cool in summer – heat in winter.

"Comfort-Conditioners" are a Holly exclusive, offering many advantages not found in conventional air-conditioners. WRITE, WIRE OR PHONE for complete information and specifications.

HOLLY MANUFACTURING COMPANY
A division of the Siegler Corporation
875 South Arroyo Parkway
Pasadena, California

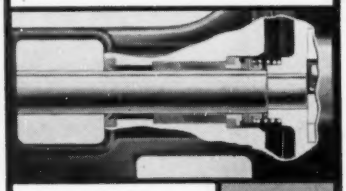
ALL VIKING LP-Gas pumps

available with Return-to-Tank Valves

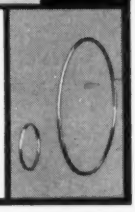


PLUS

MECHANICAL SEAL...



...and O-Ring Gaskets for non-leak operation



The Viking Return-to-Tank valve can be substituted in place of the regular safety relief valve shown on the pump. Return-to-Tank valve is especially recommended for the handling of LP-Gas, as it permits bypassing of excess liquid directly back to tank. This practice eliminates the possibility of excess vaporization and results in even quieter operation.

For complete information, ask for catalog Section Hb.

VIKING PUMP COMPANY

Cedar Falls, Iowa, U.S.A. In Canada, it's "ROTO-KING" pumps

See our Catalog in Butane-Propane Catalog

Handy TUBE BENDER

Smoothly Bends Any Pipe or Tubing 3/8" to 1 1/8" O.D. . . .

• Just a twist of the wrist assures perfect, even bends — right angle, any angle, U and offset. Save enough on ONE job to pay for your HANDY TUBE BENDER.

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See your supply house—or write for free folder today.

lunches and a brunch on Lake Hamilton at the home of Mrs. B. T. Harris.

Registration at the convention was 400.

Busch elected president North Dakota Association

The North Dakota LPGA held its annual convention June 14-15 at the Gladstone hotel, Jamestown, N. D. Registered attendance totalled 88.

Arthur Morken, Farmers Union Central Exchange, was elected president of the Association; K. S. Backlund, Bison Gas Co., Kenmare, vice president; and G. W. Busch, Jamestown Bottlegas Co., Jamestown, secretary-treasurer.

New directors elected for two years include, G. W. Busch, Jamestown Bottlegas Co., Jamestown; Joe Weber, Farmers Union Central Exchange, Bismarck; C. L. Beiers, Beiers Gas & Appliance Co., Langdon; and Jack Coughlin, Westland Oil Co., Minot.

Subjects covered "Safety" by Palmer Gray, Sinclair Oil Co.; "Excessive Fuel Consumption and Inefficient Operation Caused by Improper Pipe Sizing," by a representative of Fisher Governor Co.; "Legislation and Taxation," by Art Kreutzer, LPGA, and "What Carburetion Can Do For You," by Karl Deck, Zenith Carburetor Division, Detroit, with slides and films by Floyd Fleim, Phillips Petroleum Co.

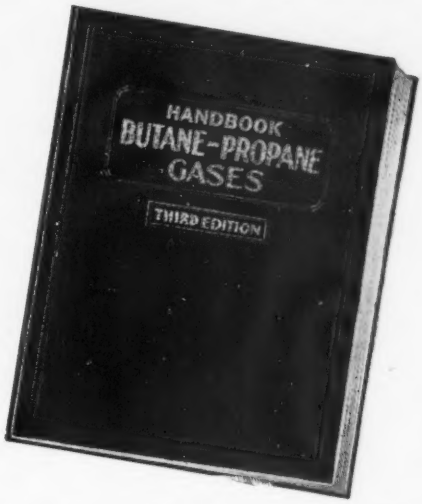
NFPA hears Dr. Killian at 60th anniversary banquet

Dr. James R. Killian, Jr., president of Massachusetts Institute of Technology, was the principle speaker at the 60th anniversary banquet of the National Fire Protection Association, June 6 at the Statler hotel, Boston, Mass.

The banquet highlighted a five-day conference, June 4-8, of top fire protection authorities from this country and abroad. The occasion also marked 60 years of voluntary public service effort by the NFPA to make the world's peoples safer from fire.

Special sessions opened the meeting on Monday. They were the 4th Annual Aviation Fire Safety Seminar, the Annual Meeting of the NFPA Fire Marshals' Section, and the Annual Meeting of the NFPA Electrical Section.

The Only Complete Reference Book on Liquefied Gas Engineering, Installation and Operation



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CONTENTS

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The Progress of the Industry
The ABC of L. P. Gas

PART 2. Physical and Chemical Properties
Properties of the Hydrocarbons in L. P. Gas
Properties of Butane-Propane Mixtures
Volume Correction Factors
Analytical Determination and Testing
Fire Protection and Control

PART 3. Production of L. P. Gas
Natural Gasoline Plants, Recycling Plants, Oil Refineries

PART 4. Transportation and Storage
Delivery by Truck, Rail Water and Pipe Line
Storage Tank and Pressure Vessel Design
Liquid Metering and Pumping Systems

PART 5. Distribution of L. P. Gas
Installing and Servicing L. P. Gas Systems
Semi-Bulk Systems
Bottled Gas Systems
Gas Utility Service from Central Plants
Multiple Utility Service from a Central Plant

PART 6. Utilization of L. P. Gas
Comparative Performance With Other Fuels
Appliance Installations and Testing
Domestic Applications
Commercial Applications
Industrial Applications
Enrichment Peak Load, and Standby Uses
A Fuel for Internal Combustion Engines

PART 7. Regulations
N.B.F.U. Pamphlet No. 58
Motor Carrier Tariff No. 7
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Unloading from Railroad Tank Cars
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Interchangeability of Other Fuel Gases with Natural Gas
L. P. Gas Insurance
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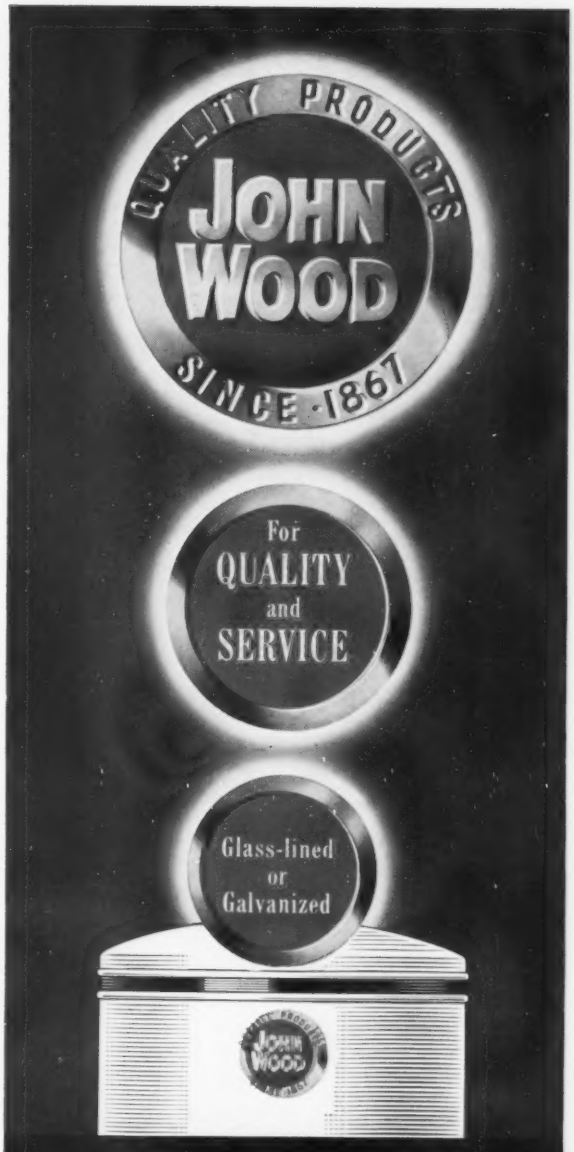

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★ **Designed for Time-Saving Operation and Longer Service**

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★ **Choose From 5 Models— 1200 to 2200 WG Capacities**

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Tuesday's topics covered, "Fire Protection Development in Great Britain," and "What's Wrong With Fire Extinguishers."

Speaking at the fifth and sixth general sessions on Thursday were Boston's Fire Commissioner Francis X. Cotter; William F. Fitzgerald, chief of the Seattle Fire Department and president of the International Association of Fire Chiefs; and Fire Commissioner Frank L. McNamee of Philadelphia.

Highlight of the closing session on Friday was a speech on the challenge of automation to industrial fire safety delivered by J. H. Hutchinson, civil defense and fire services officer of Imperial Chemical Industries, Ltd., England.

National LP-Gas Council appoints Kohles to board

Frank S. Kohles, sales director, of the Metalbestos Division of William Wallace Co., Belmont, Calif., has been appointed to the board of directors of the National LP-Gas Council, as equipment manufacturer representative for the Liquefied Petroleum Gas Association, Inc.

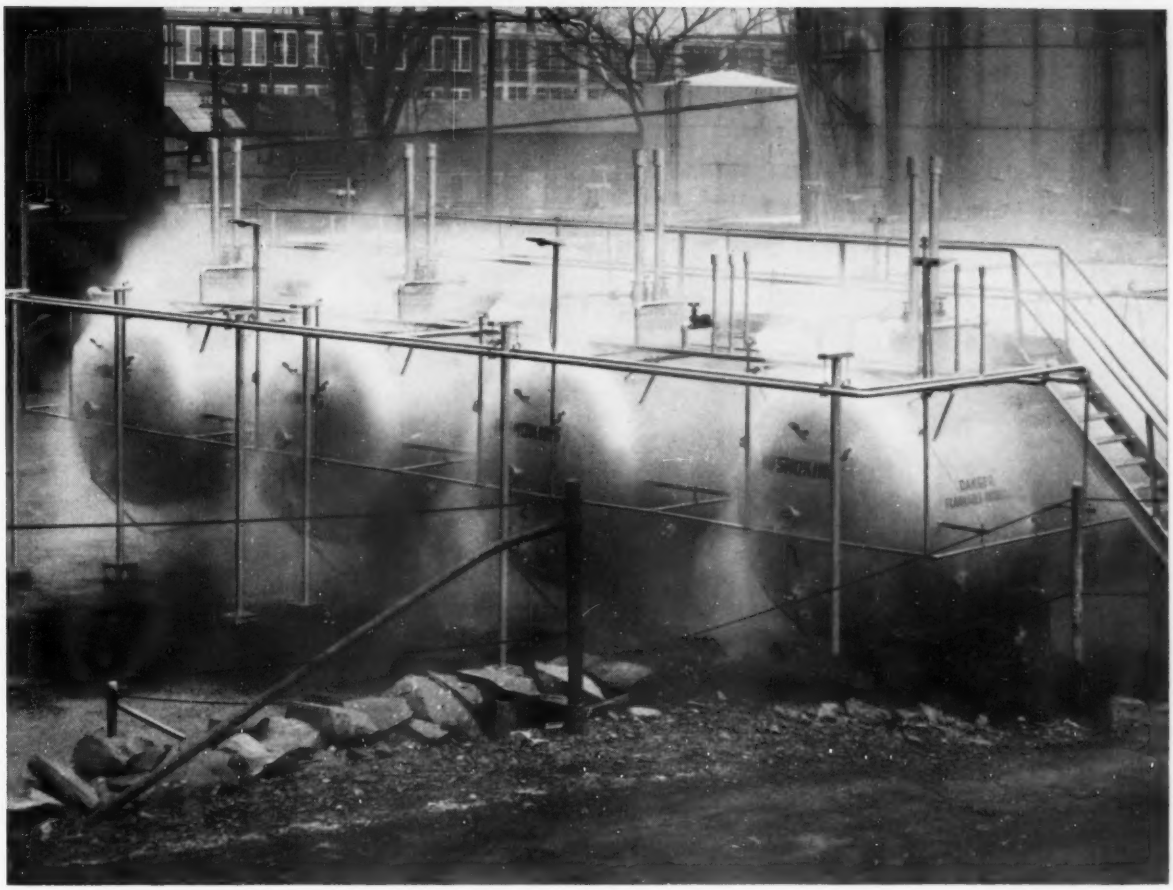
This appointment is for an unexpired term, ending Nov. 1, 1957.

Safety Roundup

L.P. gas service stations

The National Fire Protection Association publication, *Fire News*, calls attention to a fire which resulted when a truck backed into and broke a fill line on a self-service L. P. gas station in Indiana. The shut-off valve for the line was located in a fenced and locked pump house, so it was not possible for the truck driver to stop the escape of gas.

NFPA calls attention to the clause in Pamphlet 58 which requires that a competent attendant be on duty at all times when any L. P. gas service station is in operation. May we add that it is not considered good design to have any exposed plumbing carrying L. P. gas in a service station area where it might be struck by a vehicle. That's what we have guard posts, rails and curbs to prevent.



Blanket Protection
for your LP-Gas tanks

Proper fire safeguards are uppermost in importance in LP-gas storage. For example, tanks must be protected against extreme heat exposure. Leaking gas, if it develops, must be thinned out to the point where it will not burn. And fire, if it should occur, must be localized and safely disposed of.

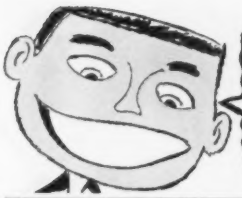
With a Grinnell ProtectoSpray System, you get protection against all of these eventualities.

When heat raises tank temperatures dangerously, a drenching blanket of water provides instant cooling . . . reduces internal pressure and helps prevent rupture. In addition, positive air turbulence is created, even in still air, to assist in dilution of leaking gases by the inert gases present in the air. Water-vapor dilution aids in thinning out gas-air mixtures so that they will not burn. Moreover, if gas should ignite, the fire can be localized — permitting safe disposal of the gas by burning where it escapes, thus reducing the fire explosion hazards downwind or downgrade.

There is a Grinnell Fire Protection System for every hazard. Call on Grinnell for advice about the one best suited to your needs. Grinnell Company, Inc., 272 West Exchange St., Providence, R. I.

GRINNELL
PROTECTION AGAINST EVERY FIRE HAZARD

Manufacturing, Engineering, and Installation of Fire Protection Systems since 1870



Have You Seen Mutual's NEW B-91?

. . . it has new sales features that make it "Hotter" than ever as a modern hand torch for plumbers, flooring mechanics, electricians, linesmen and other craftsmen.

NEW Multiple Valve combines 10% Spring Relief and Filler-Outlet Connection . . . providing greater safety and ease of operation.

NEW Rubber-dipped handle gives easy grip, better control of flame.

NEW single-shell ICC Cylinder gives lighter weight, neater appearance.

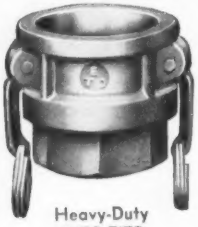
NEW "Irish-green" paint gives real sales appeal.

Write for B-91 Catalog Sheet.

B-91 Accessories include tips for all types of work . . . from fine pointed to blast-type flame. Shown above is 491-5 tip which gives broad flame.

Mutual

LIQUID GAS EQUIPMENT CO., INC.
17129 South Broadway, Gardena, Calif.



Heavy-Duty EVER-TITE Quick Coupling

Dust Caps for Adapter Unit

Dust Plug for Coupler

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quality in

heavy-duty

quick coupling units

All of the advantages of Standard Ever-tite Couplings — precision engineering, quality materials, superior performance — are embodied in *heavy-duty* Ever-tite units, with the additional feature of *heavier construction* throughout.

Test them now — under any conditions. They'll prove that if you want tough, heavy-duty couplings that function *right*, it pays to use *Ever-tite*.

EVER-TITE COUPLING CO., INC.
254 West 54th Street, New York 19, N. Y.

BPN

the trade

Bowman, Northcutt, Walters promoted at Rockwell

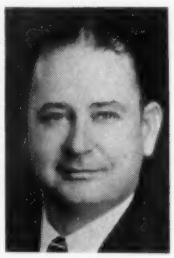
J. H. Walters

Promotion of three key sales personnel has been announced by Lloyd A. Dixon Jr., vice president in charge of Rockwell Manufacturing Co.'s Meter and Valve Division.

Gilbert T. Bowman, general products manager, and J. W. Northcutt, Southern regional sales manager, have been named assistant vice presidents. Both will make their headquarters in Pittsburgh.

Jack H. Walters, product manager-petroleum and industrial liquid meters, will move to Rockwell's Southern regional headquarters in Atlanta, Ga., to succeed Mr. Northcutt.

G. T. Bowman



J. W. Northcutt

Assistant vice presidents

Mr. Bowman joined Rockwell in 1940 as a sales engineer. He became San Francisco district sales manager in 1945, sales manager-gas products and Nordstrom valves in 1952, general products manager in 1954.

Mr. Northcutt, who joined Rockwell in 1937, has been Southern regional sales manager since 1952.

Mr. Walters joined the company in 1945 as a sales engineer in the Louisiana territory. He became Houston district sales manager in 1951. He moved to Pittsburgh as

Now! New Heavy-Duty V-8's!

With the most GO under any truck hood!

Powered to pace today's traffic!

These new 206, 226, 257 hp. V-8's in the new INTERNATIONAL V-Line have a "built-in" swift response with maximum payload. You get more *go* at lights . . . more "keep going" on the hills with shifting greatly reduced . . . higher average road speeds within legal limits . . . top performance where it's needed most.

In short, the new INTERNATIONAL V-Line is built to set new highs in your profit column!

Tested and proved as no other trucks have ever been!

Developed and tested in the lab, then put through more than 1,000,000 test-track miles, and in 2,500,000 on-the-job miles in 39 different truck vocations.

These tests were made by profit-minded truckers with a gimlet-eye on mileage, hauling time and repair bills. Their conclusions—"GREAT, on every count!"

3 Great new INTERNATIONAL V-8 engines!

	V-401	V-461	V-549
Displacement	400.9 Cu. In.	461 Cu. In.	548.7 Cu. In.
Bore and Stroke	4⅛ x 3¾	4⅛ x 4-5/16	4½ x 4-5/16
Maximum hp.	206 @ 3600	226 @ 3600	257 @ 3400
Maximum Torque	355 @ 1800-2000	420 @ 1600	505 @ 2000

Pressure Controlled-Flo Cooling! Full circulation, fully controlled. Cold weather by-pass.

"Wet" Replaceable Exhaust Valve Guides.

Exhaust Valve Faces and Seats of Stellite.

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Get all the facts behind this great new truck story. Send for booklet "New Heavy-Duty V-8 Power Where You Need it Most." Write INTERNATIONAL HARVESTER COMPANY, P. O. Box 7333, Chicago 80, Illinois, or see your INTERNATIONAL Dealer or Branch.

INTERNATIONAL® TRUCKS

All-Truck Built to save you the BIG money!

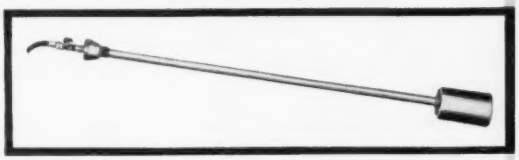
Motor Truck • Crawler Tractors • Construction Equipment • McCormick® Farm Equipment and Farmall® Tractors

THE NEW *Weldit*
MELTERAMA
WITH REPLACEABLE BURNER ORIFICE

The T-3 MELTERAMA, used with the Weldit 4826-D Safety Check or High Pressure Regulator, gives instant, clean, controlled heat for all melting operations. Incorporating base and burner into one unit gives Stability and Convenience, and Weldit's revolutionary replaceable Burner Orifice adds efficiency and longer life. High and Low Heat Control.

"DESIGNED FOR A MULTITUDE OF USES"

B-1 WELDING JET SUPERHEATING TORCH



Weighing only 3 lbs. and of steel construction, the B-1 operates off of any standard propane tank at tank pressure. Length, 40½". Consumption, 26 lbs. per hour. Produces 653,800 B.T.U.

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For L. P. Bulk Storage Leading Firms Pick **NELSON**

There are over 250 SYSTEM NELSON bulk plants for the storage of LP Gas and Anhydrous Ammonia located in 25 states. Take advantage of our experience and get extra value and service on your next storage problem. Contact us for a meeting with an experienced storage engineer.

SYSTEM NELSON

EDWARD S. NELSON, Ltd.
Clarksdale, Mississippi

THE LEADING NAME IN THE BULK STORAGE FIELD!

product manager-gas products in 1954 and became product manager-petroleum and industrial meters the following year.

Ludwig becomes vice president for Controls Co. of America

Remy Ludwig has been appointed vice president of the International Division of Controls Co. of America it has been announced recently. Mr. Ludwig will supervise all administrative duties and management of the company's foreign plants in Cooksville, Ontario and Nijmegen, Holland, in addition to the development of export sales for both A-P Controls and Soreng Products Division.

This appointment is announced by Louis Putze, president of the Controls Co. of America.

R. Ludwig
Controls Co.

J. M. Clark
Fisher

Fisher Governor appoints Jack Clark LPG representative

Jack M. Clark has recently been appointed Midwestern district L. P. gas representative for Fisher Governor Co., Marshalltown, Iowa. He had been associated for the past several years with Fisher's eastern district office in Westport, Conn.

Mr. Clark's territory covers the states of Minnesota, Wisconsin, Iowa and upper Michigan. He will make his headquarters in Minneapolis.

Teverbaugh and Sutherland promoted at Texas Natural

The appointment of Harold G. Teverbaugh as general superintendent and of John A. Sutherland as chief engineer of Texas Natural Gasoline Corp. has been announced by John T. Oxley, president.

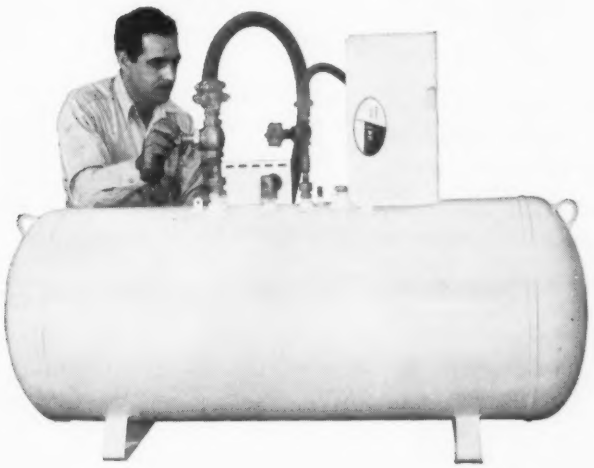
Mr. Teverbaugh joined Texas Natural in November, 1953, as assistant manager of the gas division. Prior to that time he was associated with Sunray Oil Corp.

Mr. Teverbaugh will be in charge of all administrative and supervis-

Kaiser Steel LPGas SYSTEMS

This trademark means business ...for LP-Gas dealers

Safe, dependable operation pleases your customers when you install Kaiser Steel LP-Gas Systems. Precision controls, the most dependable and accurate available, assure efficient, uninterrupted service. Each part of the system is carefully tested for maximum safety and freedom from maintenance. Winter freeze-ups are eliminated because Kaiser Steel LP-Gas Systems have no moisture content.



Servicing is easy for your drivers because all controls are located under a single hinged hood on the top of the tank.

Tank sizes are available for residential, commercial and industrial installations. Bulk storage tanks are fabricated in sizes up to 30,000 gallons water capacity. Call or write for complete information.

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Be ready for the
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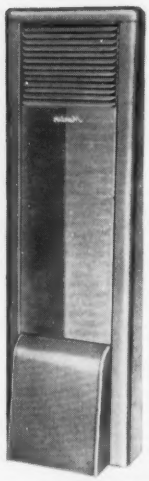
Martin GAS HEATER
HEAT WAVE



The blower as shown is available on all models

*Wall heaters approved under 1956 AGA requirements

Enjoy the "good old" selling time

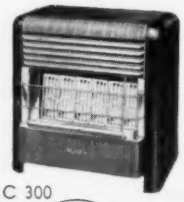
Stock and sell the complete line

Vented Space Heaters
8 models—15,000 BTU to 85,000 BTU

Vented Floor Furnaces
3 models—35,000 BTU to 70,000 BTU

Vented Wall Heaters*
5 models—25,000 BTU to 60,000 BTU

Unvented Space Heaters
23 models—10,000 BTU to 50,000 BTU



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Every Martin Gas Heater is AGA approved for natural, liquefied and manufactured gases.

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Manufactured by
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Huntsville, Ala. *Over 50 years heater experience*

AUTHORIZED DEALER MARTIN GAS HEATERS

PERMANENT LEAK PREVENTION

WITH
RECTORSEAL No. 2

● The secret of this lasting leak prevention is in Rectorseal's plastic elasticity. Although thin in the can for fast, easy application, Rectorseal forms a protective plastic coating in the thread grooves that positively keeps leaks out. Because of its elastic nature it is always easy to break-out. Moreover, it is insoluble in L-P, natural and manufactured gas, all petroleum fractions, and anhydrous ammonia . . . holds pressures up to 11,350 psi.

Why not try it? Order from your favorite supplier today.

RECTORSEAL, DEPT. A
2215 Commerce St., Houston 2, Texas

RECTORSEAL # 2
MAKING THE GAS INDUSTRY SAFER

ory work for the engineering and gas departments of the company.

Mr. Sutherland joined Texas Natural in June, 1955. He will be in charge of all engineering and operations of Texas Natural's eight gasoline plants located in Texas.

New sales representatives for Steel Cooperage are appointed

James P. Parker, sales manager, of Steel Cooperage Division, The Serrick Corp., Detroit, announces the appointment of Thomas V. Scott to sales representative for the complete line of Lee cylinders in the states of Florida, Alabama, Georgia, Louisiana, and Mississippi.

Carl Olstad will handle the line in Minnesota and North Dakota, headquartering at Minneapolis.

Seidel named vice president of Minneapolis-Honeywell

Glenn E. Seidel has been appointed to the newly-created corporate position of vice president in charge of engineering for Minneapolis-Honeywell Regulator Co.

Mr. Seidel has been a member of Honeywell's engineering organization for nearly 14 years and since 1952 has been vice president in charge of engineering in the firm's Minneapolis plant.

In his new position, he will have responsibility at the top-management level for coordinating and directing research and engineering activities throughout the corporation, and will represent these activities in corporate plans and decisions.

J. S. Corrigan

C. M. Konvalinka

John Wood Co.

Konvalinka and Corrigan promoted at John Wood Co.

C. M. Konvalinka has been appointed vice president and director of marketing and John S. Corrigan has been appointed vice president and general sales manager of John Wood Co. Ltd., according to A. M. Aikman, president.

Prior to his new position, Mr. Konvalinka was vice president and general sales manager of the company. Mr. Corrigan was assistant to the president of General Steel Wares Ltd.

Tappan Stove names Adrian territory manager

Boyd Adrian has been appointed a territory manager for the Tappan Stove Co., according to an announcement by Arthur B. Ritzenthaler, vice president in charge of sales.

A service school instructor for the Tappan service department since November, 1954, Mr. Adrian will be responsible for sales in central and north central Pennsylvania.

Plouffe joins Ruud as a technical assistant

V. J. Plouffe has joined Ruud Manufacturing Co. in Kalamazoo, Mich., as a technical assistant to R. N. Spear, sales manager of Ruud commercial gas water heaters.

Mr. Plouffe was formerly central sales manager for the Dutton Boiler Division of Hapman-Dutton Co.,

This plant is safer since they put these Crane valves on hazardous fluids

THE CASE HISTORY—How safely you handle hard-to-hold combustible fluids can depend on the valves you use. Read how a large Midwestern printing and binding plant, by changing to the right valves, encouraged employee care and safety while stopping hazardous leakage and waste.

The plant's supplies of kerosene, naphtha, benzol and similar fluids were stored in a fireproof room. But the danger was in the constant dripping and leakage at the tanks.

The original pump apparatus on the drums was discarded and ordinary valves were installed for drawing supplies. Still the hard-to-hold fluids dripped and leaked—through the valve packing and stuffing box, and at the seats. Fluids were lost . . . the high maintenance costs continued . . . and the unsafe conditions remained.

Changing to Crane No. 130 brass valves on the drum outlets stopped all previous trouble.

To-date they've given more than a year of leak-free, maintenance-free service. These valves have special features for handling light oils, gases and volatile fluids.

Underwriters' Laboratories approved for LP-gases, Crane No. 130 valves have a composition disc soft enough for tight seating, yet stiff and resilient to take hard wear. The disc, cemented in its holder, prevents around-the-disc leakage. The stuffing box with molded asbestos packing is extra deep for durable stem sealing.

No. 130 valves are typical of Crane quality and value, and the complete selection you have in the Crane line in valves and fittings for every flow control need.

You'll find that specifying and ordering Crane materials will lead to lower ultimate costs for your piping equipment.

CRANE VALVES & FITTINGS

PIPE • KITCHENS • PLUMBING • HEATING

Since 1855—Crane Co., General Offices: Chicago 5, Ill. Branches and Wholesalers Serving All Areas

Kalamazoo. Prior to that work, he was a boiler and machinery engineer in Detroit for the Hartford steam boiler inspection service, and in Kalamazoo and western Michigan for the Lumberman's Mutual Casualty Co.

TRADE NOTES

Maryetta Hight has been appointed home service specialist for the southwestern region of *Whirlpool-Seeger Corp.* She will make her headquarters in the Dallas office.

Crane Co. has announced executive appointments in two of its major sales divisions. They are: *J. W. Greene* who was named director of industrial sales, and *W. A. Burbine* who became director of heating sales.

W. N. Peacock, Jr., has been named a director of research and engineering from chief engineer, and *Dillard R. Cantrell*, from assistant chief engineer to chief engineer of *Trinity Steel Co. Inc.*, Dallas.

Promotion of *Arch L. Graham* to new duties as sales manager of *Delta Tank Manufacturing Co. Inc.'s* Pressure Vessel Division is announced. He has served as general works manager of Delta's Baton Rouge plant since joining the company two years ago.

American Meter Co. Inc., Philadelphia, has appointed *Richard E. Martin* to the position of sales engineer for the Pittsburgh sales district with headquarters at Lexington, Ky., and *Robert R. Troyer* as assistant to the advertising manager.

Singer B. Irelan

Singer B. Irelan, a director of Cities Service Co., and president and a director of Cities Service Oil Co. (Del.), died in New York City, June 18 following a brief illness. He was 67 years of age.

He had been associated with Cities Service since 1909 and was one of the nation's oustanding figures in the electric utility, petroleum and natural gas industries.

Mr. Irelan joined the Cities Service organization as a trainee with the Denver Gas & Electric Co. in 1909.

In 1910 he was made secretary and treasurer of the Fremont (Nebr.) Gas & Electric Co., and through the years fulfilled a number of official positions within the Cities Service system.

In addition to being president and a director of Cities Service Oil Co. (Del.) and a director of the parent company, Mr. Irelan was president and a director of Cities Service Oil Co. Ltd., Cities Service Production Co., and Cities Service Pipe Line Co., and Lafitte Oil Traders Inc. He was also executive vice president and general manager of Canada-Cities Service Petroleum Corp.

Mr. Irelan was a director of Cities Service Petroleum Inc.; Empire Gas & Fuel Co.; Texaco-Cities Service Pipe Line Co.; Richfield Oil Corp.; Great Lakes Pipe Line Co.; Cities Service Pipe Line Co.; and the first National Bank & Trust Co., Tulsa, Okla. He was also a trustee of the Midwest Research Institute of Kansas City.

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And why not—for Enterprise sales are up . . . up . . . up . . . ! So the dealers are making more money. Yes, year after year, Enterprise sales skyrocket upward. Dealers are happy and the customers—Enterprise customers—are the most satisfied people we know!

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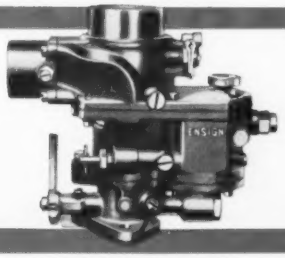
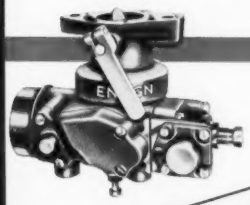
VACUUM OPERATED

XG GAS CARBURETOR
1¼ TO 2 IN. SAE

MG1 GAS CARBURETOR
¾ AND 1 IN. SAE



CG GAS-GASOLINE
COMBINATION CARBURETOR
1¼ TO 2 IN. SAE



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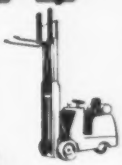
LP-GAS Carburetion



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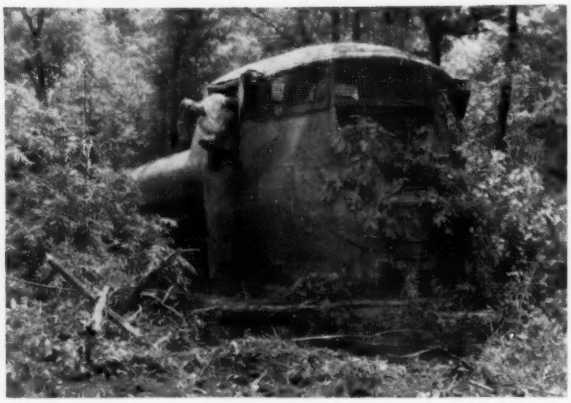
Pioneers in Efficient Carburetion Established 1911



The world's largest land clearing machine, propane powered, converts forest land into farm land in a single operation. An enormous circular saw on the front of the machine cuts the timber and stumps below the ground. The machine moves through the timber cutting an 8 ft swath, clearing an acre an hour. Fuel consumption is 30 gal. per hour.

Butane drives largest land clearing machine

Louisiana engineer builds bigger machine to do land clearing job that "stumped" the largest tractors. Results — faster clearing at lower cost, with land ready for immediate cultivation.

R. R. Moulden, who installed carburetion, stands beside butt of rock elm cut off in minutes by giant land clearing machine.

By CARL ABELL

WE have not yet heard of a propane operated lawn mower, but down in Louisiana a 60-ton LPG-fired machine operating on a similar principle is mowing off standing timber at the rate of more than one acre per hour. Trees are cut off below the surface of the ground and as soon as the debris has been burned the land is ready for cultivation and planting. Does that sound fantastic? It is! Here's the story.

In the state of Louisiana there are more than one million acres of rich dark river bottom land, potentially as good farm land as any in the United States. This land is covered with standing timber so dense that clearing by ordinary methods costs more than the land is worth for farming.

The commercially valuable timber consisting of cypress, magnolia, oak, hickory, pecan, and other hardwoods, and the varieties which can be converted into paper pulp, have already been harvested. The remaining growth is too dense to permit profitable reforestation. The stumps remain in the standing timber, complicating the problem of making commercial use of the land.

Under present conditions this land is not even good for pasture and the owners say that it will not produce enough revenue now to pay the taxes. Various methods of clearing this land have been undertaken, but they have been either unsuccessful or too expensive.

Burning the standing timber has produced spotty results and the remaining stumps have made cultivation impossible. Regrowth of the undesirable species has been so rapid that the clearing by fire has been nullified and not enough results have been obtained to justify the effort.

BPN exclusive

Some land has been cleared satisfactorily by the use of heavy track-layer equipment pushing heavy steel blades beneath the surface to cut off the roots and stumps. While this has resulted in satisfactory clearing, it has proved too expensive to be commercially applicable on a widespread scale.

Dean Shields of Waverly, La., is one of the men who tried clearing land with this heavy equipment, and gave it up. The strain on the power transmission equipment was so great that it literally tore itself to pieces. Tractor life in this service was about two years and in the meantime the cost of maintenance added up to $10 per acre.

Mr. Shields had considerable background in the operation of a machine shop and the design of heavy machinery for special purposes. He decided to build a machine which would saw the timber off under the ground. This would greatly reduce the strain on the tracks and the drive mechanism. He figured he would need a saw large enough to clear a way through the forest for the machine that pushed the saw.

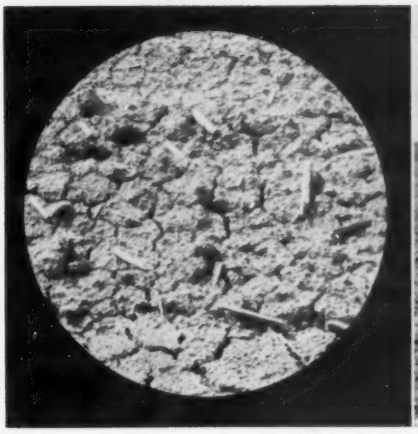
He ended up by designing a circular saw with a blade eight feet in diameter and four inches thick so that it would be rigid under the thrust of the propelling machine. This saw was to operate in a horizontal position below the surface of the ground.

The two 500-gal. tanks mounted along both sides help to protect internal machinery from falling trees.

The power requirements of this saw were such that approximately 750 hp had to be transmitted to a right angle drive from an engine located in the chassis of the machine. Getting the proper speed reduction between the engine and the saw would require a double-reduction gear drive, and since there was no such gear in commercial production, it was necessary for him to design and build the thing himself.

For the power plant to drive the saw he was able to obtain an Allison aircraft engine through war surplus channels. This is a supercharged aircraft engine designed to operate at 1750 hp and at a speed of 3200 rpm. By removing the supercharger, changing the cam shaft to get a different valve action at 1400 to 2100 rpm, which was the desired operating speed, and carbureting the engine with

After felling, the trees and brush are pushed into windrows by a fork mounted bulldozer-wise on a Caterpillar tractor. When the rubbish is burned, the land can be immediately put into cultivation.



This field, cleared early in 1955, grew a crop of cotton that same year that paid for the cost of clearing. Note twigs and chips chopped into soil by disc tools.

propane, the necessary 750 hp could be obtained.

It was necessary to operate the saw independently of the propulsion so a second engine was needed to drive the "land clearing giant." For this purpose, Mr. Shields procured a 602 cu in. Continental engine equipped to operate on propane. The drive mechanism for the machine is substantially the same as that of a standard heavy Caterpillar tractor. The Continental engine produces approximately 175 hp with a compression ratio of 8.5:1.

With the help of the Moulden Supply Co., Jackson, Miss., the engines were equipped with Ensign carburetion units and the fuel tanks for the vehicle were designed and put into production.

Two fuel tanks are used, each holding 500 gal. They extend from the back of the cab to the rear of the vehicle and serve also to protect the internal machinery from the impact of any trees which may fall across the machine. This situation frequently occurs.

The shells of the tanks were rolled from $\frac{5}{8}$ in. special steel and the hemispherical ends were forged from $\frac{1}{2}$-in. stock. All valves and fittings are mounted on the protected sides of the tanks.

The cab of the machine is heavily armored at the sides and top and the windshield is protected by a heavy steel grill. The total weight of the machine ready for the job is approximately 60 tons.

When operating through heavy timber, Dean Shields is a very busy man. He is actually operating two machines at once — a heavy duty tractor and an enormous power saw. The Allison engine idles at 1400 rpm and requires very little additional power to clear away the spots of undergrowth.

This light cutting is handled in the low speed range of the engine but when a real tree is encountered, the throttle is opened wide and the engine speed goes up to 2100 rpm, which is the maximum speed allowed by the governor.

Allowing for losses through the drive mechanism, this puts a max-

imum of 540 hp on the saw blade, which is sufficient to cut the largest and toughest trees in the area.

Some of the special problems connected with the operation of the machine come from the nature of the growth or the stumps to be removed. Rock elm, which has no commercial value and is extremely hard, grows to diameters as great as four feet at ground level. The cutting of this timber is slow, and requires the maximum power available to the saw. Cypress stumps cut easier, but are wide and tough. Cutting through either of these raises such a din from the engines that special muffling type exhaust lines were designed and added to the machine to prevent deafening of the driver. Hackberry and poplar are soft and spongy, and the saw goes through them so fast that the saw teeth sometimes produce chips a foot long, four inches wide, and an inch thick. Rattlesnakes and water moccasins, which are plentiful in these woods, sometimes get caught in the saw and come through like sausage. Fuel consumption is approximately 30 gal. per hour and this amount of fuel clears a little more than an acre. The machine is refueled twice each week.

Because the tanks are located close to the engines and nearly half of each tank is exposed directly to engine heat, the temperature and pressure in the tanks get rather high. This requires a high butane fuel mixture or straight commercial butane. And even so, the operating pressure sometimes gets very high.

In order to offset this heat and eliminate the hazard of lost fuel through the pressure relief valves, the original fuel tubing system has been replaced with tubes large enough to permit operation of both engines on tank vapor. This has provided a substantial reduction in the operating temperature and pressure of the tanks.

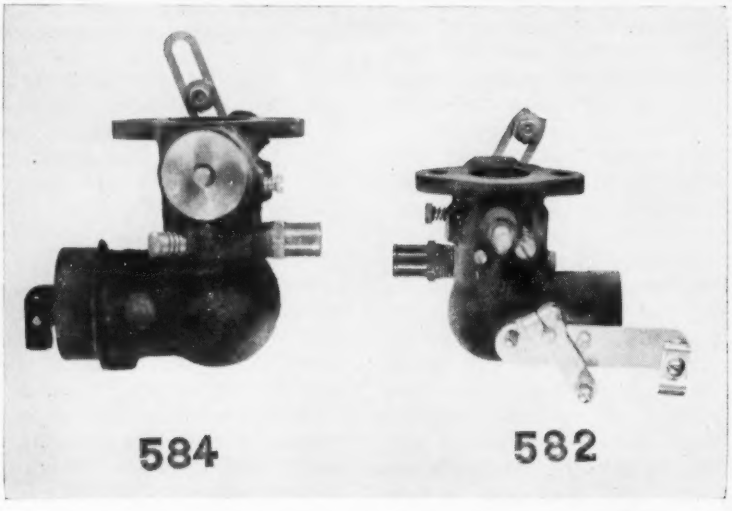
This land clearing giant has now been in use through the bigger part of two summers. Its operation has proved very satisfactory, particularly from the standpoint of maintenance costs. Wear and tear on the engines is negligible, and the wear and tear on the drive mechanism is comparable to that of similar caterpillar drives in normal earth moving service.

The services of the machine are contracted for a long period in advance. Some of the earliest tracts in which it worked produced their first crop last year and owners report that the profits on cotton crops have paid back the cost of clearing the land in the first year.

Because the cut-off roots are only a few inches below the top of the ground, it is necessary to farm this land with disc implements for the first three or four seasons. As the soil is warm and moist, the underground roots decay rapidly and it is anticipated that after about the fourth season, normal tillage tools may be used.

In the meantime, the world's first big tree-size lawn mower goes merrily on its way clearing an acre an hour whenever weather permits, and burning 30 gal. of butane for every acre of this prime farm land that is readied for agricultural production. ■

Those Little Black Carburetors



You see more and more of them

J & S has perfected a venturi type carburetor with a new "silver dollar control," to give you

- GOOD STARTING
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Three Sizes fit 70% of all farm tractors and a great majority of stationary engines, 100 to 300 cubic inches, and fork lift trucks. See your J & S distributor or write us about the 582 series carburetors with the silver dollar control.

J.&S. CARBURETOR COMPANY
P.O. BOX 10391 DALLAS, TEXAS
"TWENTY YEARS IN GAS CARBURETION"

Chicago is not the only city which operates a large propane-powered bus fleet and is proud of it. Although Chicago's is the largest fleet (see July, 1956 BUTANE-PROPANE News) San Antonio and Wichita have sizable bus fleets operating on propane. Here are reports from those two cities.

General view of the outdoor bus parking area at San Antonio Transit Co.'s new terminal. In the center are the six 5000 gal. propane tanks for storage of the liquefied petroleum gas used for fueling the buses. The parking area handles more than 300 buses.

Other city bus fleets confirm the Chicago story

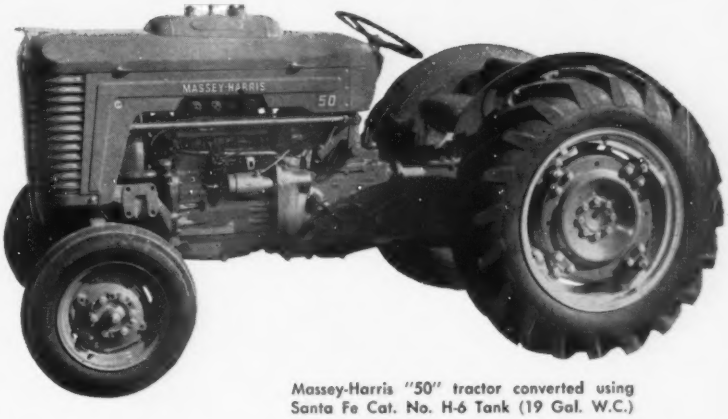
IN our July Power Department we published the experience of the Chicago Transit Authority in their operation of 1050 propane buses. Knowing that their operating results were typical, and in no way beyond the range of other city bus operations, we arranged to secure similar summaries from the two next largest propane bus fleets. These are the San Antonio Transit Co. and the Wichita Transportation Co.

San Antonio Transit Co. operates 222 propane buses, of which 110 were purchased new and 112 were converted after varying periods of operation on their original gasoline equipment. Over the past five years they have been progressing toward propane and away from gasoline in their fleet, as shown in Table I. In response to specific questions to bring out information

BPN staff report

In LP-Gas Motor Fuel Tanks . . .

Santa Fe LEADS THE WAY



Massey-Harris "50" tractor converted using Santa Fe Cat. No. H-6 Tank (19 Gal. W.C.)

This new H-6 tank is one good example of why Santa Fe continually leads the way in conversion tanks. "Custom-Built" for the Massey-Harris "50", it has all the outstanding features that LP-Gas dealers and their customers have come to expect in every Santa Fe tank.

The extremely low position of the tank presents the last word in streamlined appearance . . . and makes it simple and easy to raise the top hood section. All valves are conveniently located for fast refueling and ready visibility. And the complete kit supplied with the H-6 tank assures you a time-saving, profitable installation tailored to give complete customer satisfaction.

There are scores of other reasons for Santa Fe's leadership in LP-Gas tanks for tractors . . . one, in fact, for every make and model of farm tractor. Popular model tanks are available for immediate shipment. Write or wire today for prices and complete specifications.

Santa Fe ENGINEERING & EQUIPMENT CO.

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GIBBONS GETS A MILE

with every Reo Big "V"

Reports Mr. James P. Gibbons, Jr. President, The James Gibbons Company, Relay, Maryland—

"Last March we purchased a model A-703 Reo V-8 tractor. We are averaging one mile per gallon better with our A-703 than our entire fleet of 34 similar units of other makes. It is the easiest shifting and easiest handling tractor in our fleet and it out-pulls, out-performs all others.

"Because of the extra power, economy and maneuverability obtained from our first Reo tractor we have since then purchased three more V-8 Reo tractors."

Reo model A-703s, rated at 78,000 pounds, are only 96″ from front-of-bumper to back-of-cab and are powered by Reo's own advance design Gold Comet V-8 engines. These modern short-stroke, wet-sleeve "Big Vs" develop 220 h.p.—a startling ½ h.p. per cu. in. displacement—up to 35% more efficient than the industry average. Actually, pound for pound, Reo "Big Vs" are the most powerful truck engines on the road anywhere.

Like James P. Gibbons, Jr., you will find that no truck will perform on your job like a Reo because no truck is built and "payload engineered" to your total requirements like a Reo. Only Reo is powered by the "Big V", either 195 or 220 h.p.—gas or LPG—*and backed by a 100,000 mile or 1 year warranty.*

See your Reo Branch or Distributor for details on Reos from 16,000 lbs. GVW to 78,000 GCW with short-stroke, wet-sleeve Gold Comets from the 100 h.p. Six to the 220 h.p. V-8. Also available with the Cummins 175 h.p. Turbodiesel.

The four new Reo A-703 "Big Vs"—the performance champions of the James Gibbons Company fleet—help the oldest "Asphalt Application" Company in Maryland to continue providing the state with one of the finest road-nets in the nation.

REO MOTORS, INC.

LANSING 20, MICHIGAN • TORONTO, ONTARIO

SUBSIDIARY OF BOHN ALUMINUM AND BRASS CORPORATION

PER GALLON MORE...

The Bigger Your Load, the Bigger Your Pay

Behind a REO "BIG V"

"Payload-Engineered" Trucks and Tractors

directly paralleling that supplied by Chicago Transit Authority, Mr. J. H. Powell, assistant to the president, says:

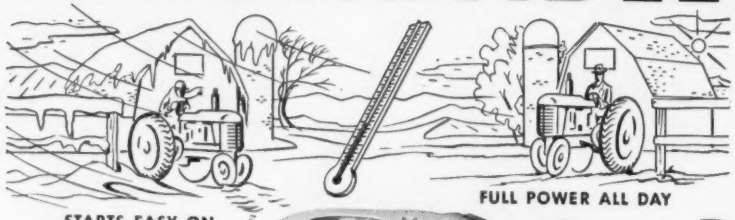
"We have never used diesel buses in San Antonio and the change from gasoline to LPG had little effect upon the public. We do, however, receive comments from visitors to the effect that the lack of fumes from our buses is quite noticeable compared with diesel buses operated in other cities. This is also true of noise to some extent.

"We have had no fires since converting to LPG; in the past, however, we had only one small fire which could be attributed to gasoline and it was extinguished before any damage was done. There have been several cases of rear-end collisions in which LPG tanks were not damaged, but in which a gasoline tank would have been seriously damaged with the possibility of a resulting fire. In only one case has an LPG tank been affected by a collision. This accident put a small dent in the LPG tank, but the tank was straightened, tested by an approved tank firm, and replaced in service. Insurance rates were not affected in any way by the conversion to LPG.

"We do not maintain figures on average gallons per fill or time per fill, but it is our opinion that the time per fill with LPG is approximately the same as with gasoline. It takes slightly longer to fill a tank with LPG, but this is offset by the fact that Parkhill-Wade tanks enable our servicing attendant to oil, air, and water the bus while the fuel is being pumped into the tank. The oil-change interval for gasoline buses is 3000 miles;

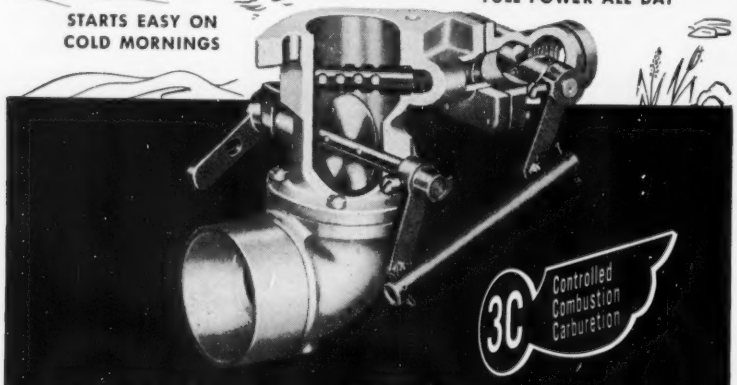
A part of Wichita's 106 bus fleet is shown here. The entire fleet is powered by propane.

DEPENDABLE



STARTS EASY ON COLD MORNINGS

FULL POWER ALL DAY



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WITH Years ahead METERING VALVE SYSTEM

STARTS INSTANTLY upon installation.
GIVES INSTANT POWER—no choking or fluttering.
IDLES PERFECTLY.
BALANCES POWER of each cylinder.
NO MULTIPLE ADJUSTMENTS—tune up only.
PERFORMS AT ALL speeds to pre-set perfection.

Easy Starting! Perfect Idling! Economy!

CENTURY GAS EQUIPMENT CO. 11188 Long Beach Blvd., Lynwood, Calif.

for propane buses it varies from 6000 to 24,000 miles depending upon the type of bus.

"The best overhaul mileage we were ever able to get out of gasoline engines was approximately 175,000 miles. Indications are that we are going to get 425,000 miles out of our best type of LPG engines.

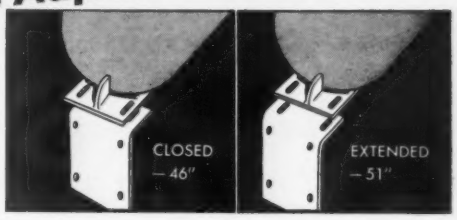
"We do not compile maintenance or oil costs by types of buses. We are therefore unable to give you a

An attendant puts propane into the tank of one of San Antonio's 222 propane-powered buses. Maintenance and oil costs are way under gasoline bus expenses.

comparison between LPG and gasoline cost per mile for anything except fuel. The comparison, however, for this item is quite favorable for LPG and is, of course, much more important than either maintenance or oil costs."

The entire fleet of the Wichita Transportation Co., consisting of 106 buses, is operating on propane. Some of these buses are now four years old, most of them are nearly that age. Up to Dec. 31, 1955, these buses had operated a total of 11,793,441 miles. During that period their cost records show the following: cost of fuel, $428,517; cost of oil, $17,549; cost of maintenance, $366,186. The maintenance cost quoted includes all labor and material for body, chassis and power plant maintenance. Cost of tires is not included, because they are on a standard tire contract which is not affected by the type of fuel used. In response to the

With Western's Adjusto tank and its specially designed brackets, you



can make all pick-up installations...

QUICKLY AND ECONOMICALLY!

Because of Adjusto's specially-designed brackets you can install it quickly and easily on ANY MAKE OR MODEL PICK-UP. Brackets are simply bolted to the sides of pickup bed, positioning tank at any desired height. The Adjusto can be easily moved from one pickup to another, without alteration of brackets. Other outstanding features include a gauge visible from driver's seat; fittings shielded by the cab; and filler valve for liquid withdrawal. Available in 37, 47, and 58 gallon capacities. For higher profits on pickup conversions, standardize with Western's Adjusto.

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AND MANY OTHERS

There's a WESTERN DISTRIBUTOR selected for Dependability and Know-How . . . Near You!

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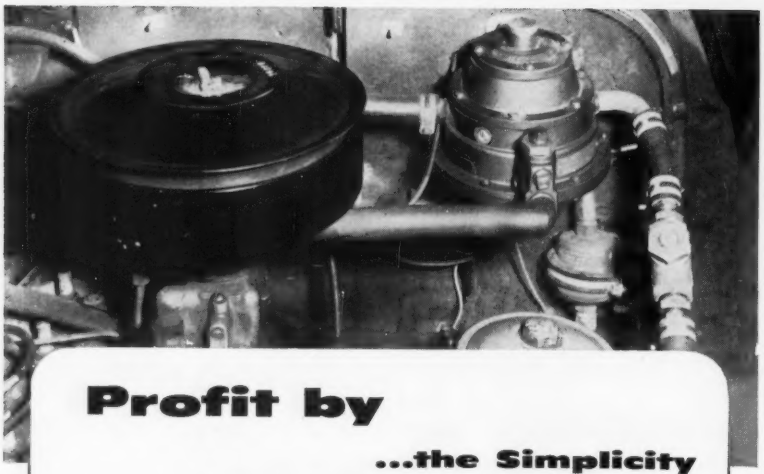

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Many LP-Gas Dealers have found DIX Units profitable to sell and install. Any competent auto mechanic can make a DIX Conversion. No special tools or parts required.

With DIX . . . You Save on Service

DIX CARBURETOR COMPANY
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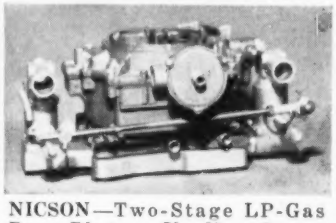
FOUR-BARREL COMBINATION CARBURETION



NICSON—Two-Stage LP-Gas Base-Plates, Use-Your-Carter, Rochester, or Stromberg Four-Barrel Carburetor with Nicson-LP-Gas Base-Plate, for the Finest in Combination-Carburetion.

Featuring Exclusive

CENTURY 3-C METERING VALVES, which Assures Perfect Starting, Idle and Mixture Control, Better Power, Better Mileage. No Flat Spots—No Restriction, Same Air Cleaner Used. Nicson, Four-Barrel, Base-Plates, Furnished Complete with all Necessary Linkage and Fittings, Assembled, and Ready to Install on Your Carburetor.

For Further Information Write DIRECT To

NICSON ENGINEERING CO.
4546 EAST WASHINGTON BLVD.
LOS ANGELES 22, CALIF.

specific questions Mr. John E. Ebinger, vice president and general manager, says:

"I will group together in one discussion your sub-topics of comfort, noise, smoke and odors. Our public, and by that I mean riders, pedestrians and automobile drivers, have found our propane-operated vehicles to have many desirable traits. We are continuing to receive many complimentary comments as well as questions as to why our engines do not 'cackle' and also concerning the absence of pungent penetrating fumes.

"You might be interested in an observation made by Mr. John Bruce, city traffic engineer of Denver, at a gathering of our public officials, representatives from some eight transit companies in the mid-west area, as well as engineers, both city and private, from various parts of the country. In attendance at this gathering were the press, radio and TV. The comment made by Mr. Bruce was as follows:

'On thing I would just like to say in looking at the Wichita operation. It is sure nice to see buses operating on propane rather than diesel as we have. That is just my own personal opinion on that. Beyond that, I couldn't say a thing. That is just a personal comment.'

"Further, just last week I received a letter from the Air Polution Control League of Greater Cincinnati concerning our use of LPG as a bus fuel. It seems that the odor and vapor of diesel engines is creating some problems in other cities.

"We have had three incidents in the five and one-half years of propane operation resulting in fires:

1. A propane leak near the gas pump one evening when the air was hot and humid and no breeze stirring. The starting of an engine at that time ignited a pocket of vapor causing burns to the arms and face

TABLE I. SAN ANTONIO TRANSIT CO.

Busses	Year Ending	Number	Miles Run Per Year	Fuel	Fuel Cost Per Mile
PROPANE	Dec. 31, 1951	93	4,197,577	$ 69,522.00	$.01656
	Dec. 31, 1952	172	7,414,639	133,698.00	.01803
	Dec. 31, 1953	172	8,478,899	156,468.00	.01845
	Dec. 31, 1954	222	8,429,183	125,668.00	.01491
	Dec. 31, 1955	222	8,503,794	119,578.00	.01406
Total—5 years			37,024,092	604,934.00	.01634
GASOLINE	Dec. 31, 1951	204	7,324,711	$253,555.00	.03462
	Dec. 31, 1952	128	4,014,958	154,372.00	.03850
	Dec. 31, 1953	122	2,061,338	90,202.00	.04376
	Dec. 31, 1954	63	1,190,708	52,584.00	.04416
	Dec. 31, 1955	51	504,805	23,067.00	.04569
Total—5 years			15,096,520	573,780.00	.03801
TOTAL			52,120,612	$1,178,714.00	.02262

of one of our employees. He fully recovered after a short hospitalization period and is still in our employ.

2. One of our employees foolishly took a frozen vaporizer into a men's rest room heated by a gas unit for the purpose of thawing out the frozen vaporizer under a hot water faucet. When the fumes built up to a proper combustion point an explosion occurred that resulted in a glass pane in the door being blown out.
3. One of our stored buses developed a leak in the fuel line and when the spark of the starter ignited it we had a jet flame that caused no damage.

"We have not had any incidents involving ruptured propane fuel tanks on our buses as the result of a collision. Several years ago, a railroad switch engine sliced across the rear of one of our buses that had gotten trapped by the lowering of the gate. All the impact did was to dent a furrow in the metal of the tank. Incidentally, the tank is still in use.

"Had the fuel storage tank held either gasoline or diesel, I shudder to think what would have happened to the bus and its passengers as well as to the switch engine. Other rear end collisions, either between our own vehicles, or trucks and automobiles crashing into the rear end of our buses have not caused any noticeable damage to our propane fuel tanks.

"Insurance-wise, our rates for storage of LPG is the same as for gasoline.

"It takes us a little over two minutes per coach to fill the fuel tanks. An average of about 70 gal. per coach is added. Present oil-change period is 21,000 miles. We are currently conducting an experiment to lengthen the period between oil changes.

"The effect that propane as a fuel has had upon our engine maintenance program borders upon the fantastic. When our bus engines were operated on gasoline, our overhaul point was about 125,000 miles with a re-ring at about 75,-

BEAM

NOW MANUFACTURES A COMPLETE LINE OF LP-GAS CARBURETORS!

UPDRAFT
DOWNDRAFT
SIDEDRAFT

- Replaceable Venturis
- Throttle Optional on either side of Carburetor
- Various Air Horn sizes available
- All Models available Vertical and Elbow
- All Models with built-in Power Adjusting Screw, Optional Inlets

DEALERS WANTED IN A FEW CHOICE TERRITORIES.

BEAM PRODUCTS MFG. CO.
3040 ROSSLYN ST.
LOS ANGELES 65
CHapman 5-5791

HERE'S HOW TO KEEP THEM RUNNING!

REGO® LP GAS EQUIPMENT

You can be sure of dependable LP Gas engine performance by insisting on REGO LP GAS EQUIPMENT . . . a complete line for every application.

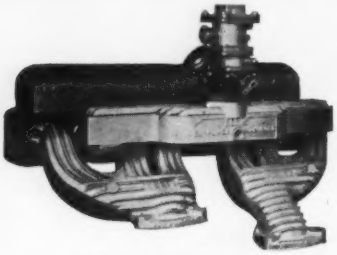
First...Foremost...Finest

WRITE TODAY for REGO literature

REGO is a registered trade mark of The Bastian-Blessing Company

The BASTIAN-BLESSING Co.
4205 West Peterson Avenue • Chicago 30, Illinois

YOU GET MORE POWER..... MORE MILEAGE



With An **ELLIS**
BU-POWER MANIFOLD

The ELLIS BU-POWER MANIFOLD holds vital expansion of fuel until it reaches the combustion chamber. By keeping cool, the Ellis Bu-Power Manifold packs power into performance . . . increases mileage and gives you far more satisfaction with LPG.

ELLIS MANIFOLD CO.
2212-A East Washington Blvd.
Los Angeles 21, California

In most cities, dial information for the number of Ellis Manifold Distributor.

Parkhill

Safety Hose Nozzles

- *QUICKER FILLING*
- *SAFER OPERATION*

For fast, safe fuel transfer . . . at customer's storage or in the plant . . . Parkhill Nozzles are dependable. They attach in 3 seconds . . . two operations. They're safe: Nozzle must be locked on before fuel can discharge. Upon release gas escapes away from hands . . . NO COLD BURNS.

PARKHILL COMPANY
2264 Huntington Drive, San Marino, Calif.

000 miles. The first two propane bus engines that we rebuilt was at 300,000 miles. At no time during the 300,000 miles did we open up the engine for any reason whatsoever. Oil consumption had gone to about 200 miles per add-gallon when we rebuilt the engines.

"When the engine was opened up, we found that the top taper wear of the cylinder sleeves did not exceed .006 inch. However, we did find that the top piston ring had wallowed out the ring land which accounted for the increased consumption of oil. As you know, pistons are now being made with a steel insert ring in the top land to prevent wallowing.

"Since the overhauling of these first two engines. we have had others that have passed the 325,000 mile mark and oil consumption still holds between 600 and 800 miles per add-gallon.

"With gasoline, our engines were badly sludged, varnished and dirty and oil changes were made at 6000 miles. With propane, at 300,000 miles, the engines are as clean as the day they came from the factory.

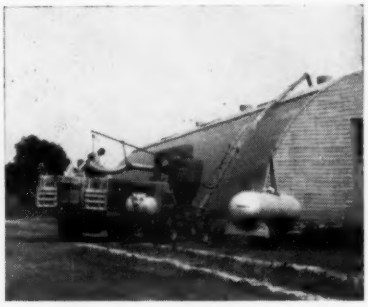
"Spark plugs are replaced around the 25,000-30,000 mile point. Ignition points have a total life of 50,000 miles, but are taken out at about 35,000 miles to be dressed before reusing. Bellows and seats of the propane regulator, costing about $1.50, are replaced at about 75,000 miles. These items, plus, the change of filter sock at time of oil change, are the only expenses incurred in maintaining an LPG engine."

There you have the story from two more large fleets of propane buses. Their experience corrobates that of Chicago—that the public likes the buses because they do not smother passengers and people using the streets with objectionable exhaust fumes—that there has been no adverse effect on insurance rates—that rear end collisions are less hazardous than with other fuels — that maintenance has been simplified and reduced in cost—that the costs of both fuel and oil have been substantially reduced. ■

POWER NEWS

Propane engine drives portable grain elevator

The Vac-U-Vator is a unique conveyor and elevator used to transfer grain and other commodities that can pass through a blower from one container to another. Under certain conditions it can make the transfer at considerably less cost than is possible with augurs and other types of conveyors. Since the commodity is carried by moving air, it is possible to use flexible tubes at the intake and discharge ends of the conveyor, which may be moved about to reach the bulk material, or to deposit in a desired location. This eliminates much of the hand labor that is customarily necessary in rigid channel conveyors for operations not employing gravity or mechanical power to move the material to or from the ends of the conveyor system.



The flexible pick-up tube on this Vac-U-Vator can be moved to any part of the bed of a truck loaded with bulk grain, eliminating the necessity of shoveling during an unloading.

A Vac-U-Vator powered by a propane engine is being used by Lafayette Elevator Co., Lexington, Mo. This company specializes in loading corn and other grain into storage bins, tanks, buildings and barges. According to Mr. Curtis B. Rocklage, manager of that company, this machine consumes slightly more fuel than the augur type conveyor, but the saving in labor more than makes up the difference in the types of transfers which his company handles.

The flexible pick-up tube can be

moved to any part of the bed of a truck loaded with bulk grain, so it is not necessary to do any shoveling during the unloading. At the other end of the conveyor, the flexible delivery spout can deposit the grain at any desired point within reach of the tube. This is particularly helpful when loading barges. A barge load must frequently be "trimmed" to within half an inch of a predetermined level. This can easily be accomplished with almost no additional leveling when using the blower type loader.

Mr. Rocklage is well pleased with the operation of the engine on propane. Filling of the engine tank is done from a portable trailer mounted supply tank which goes right along with the Vac-U-Vator as it is moved from job to job.

Well-servicing unit built on back of Mack truck

Phillips Petroleum Co. has designed what they believe to be the most completely hydraulic and air controlled well-servicing unit ever constructed for the petroleum industry.

It is now in operation in the western Kansas area, under the direction of John H. Province, well-servicing engineer.

Large capacity, mobility and ease of operation were combined into the single compact unit on a B-62X Mack truck with a gross vehicle rating of 60,000 lb.

Equipped with power steering and air brakes, the truck operates on liquefied petroleum gas with a 9.3 to one compression ratio and a 10-speed transmission. An auxiliary brake on the propeller shaft of the truck requires 75 lb of air before the truck can be moved. Also, it stops the truck automatically if the air is lost at any time.

The rig's design permits operation with a crew of three, rather than four men. The unit can be in operation in eight to ten minutes after reaching its destination.

Century carburetion on International engines

International Harvester Co. has selected the Century 3C carburetor as standard equipment on the Royal Red Diamond 501 cu. in. engines used in the International R-220, CO-220 and RF-230 series trucks, according to Century Gas Equipment Co. The carburetor is designed and calibrated exclusively for the RD-501 engine, and incorporates the Century metering valve design. The factory equipment also includes the Century Model M4 converter and strainer-fuelock assemblies.

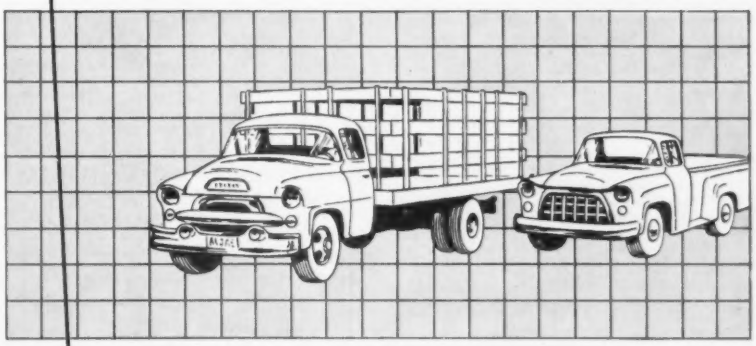
The carburetor design includes a built-in governor. Mounting of the units is compact, with a short up-slanting dry gas line from the converter to the carburetor, which insures easy starting, according to automotive authorities.

Easy starting tip

If the fuel level is too high in a gasoline carburetor the fuel will flow out through the main jet and flood the manifold, making starting difficult. The same condition can exist in an LPG carburetor. Propane is heavier than air, and if the regulator chamber is above the fuel inlet at the carburetor there can be a slow escape of fuel vapor into the carburetor, which will contribute to hard starting.

Make YOUR trucks leaders

in **PERFORMANCE** and **ECONOMY**

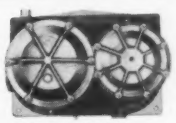


Choose ALGAS, the leader in LP-Gas Carburetion

LP-Gas the modern fuel is setting a new record for engine performance and economy in the truck and bus field. Because LP-Gas brings lower mileage costs... longer oil and engine life... fewer overhauls and lower maintenance costs, truck and bus operators everywhere are converting to its use.

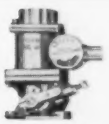
ALGAS LP-Gas carburetion equipment is the choice of the majority because since 1932 ALGAS have pioneered new developments in LP-Gas carburetion. Today ALGAS equipment is engineered to meet the most modern specifications thus assuring you of LP-Gas performance at its very best.

Write now for information on ALGAS—the complete line.



Model 1200-A
Heat Exchanger

Series 1570-E
Converter



Series 1400
Carburetor

Cable Address "ALGAS"

BUTANE ALGAS PROPANE
NATURAL GAS

Established 1932

AMERICAN LIQUID GAS CORPORATION

1109 Santa Fe Avenue • Los Angeles 21, California

BPN CLASSIFIED Advertising

All Classified Advertising payable with order. Copy must reach publisher's office prior to the 1st of the month preceding publication. Address: Classified Advertising Material, BUTANE-PROPANE News, 198 S. Alvarado Street, Los Angeles 57, Calif.

DISPLAY CLASSIFIED

$12.00 a column inch per issue. Choice of 18, 14, 12, 10 pt. display type for headings. Set with 1 pt. border. Maximum ad size 3". No cuts permitted. Publisher will set ad for maximum effect in space purchased.

UNDISPLAYED CLASSIFIED 15¢ a word. Set in 6 pt. type without border. $3.00 minimum charge per insertion. If Blind Box number care of B-P News is used, count as five words.

POSITION WANTED. Undisplayed rate is one half of above rate, payable in advance.

DISCOUNT OF 10% if full payment is made in advance for four consecutive insertions of undisplayed ads.

HELP WANTED

SALESMEN—COVERING BULK PLANTS and large dealers. We have an interesting, non-conflicting, nationally advertised line that the trade is using daily. All territories open. Reply Box 14, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

BULK PLANT MANAGER FOR LP GAS operations being started in Florida by established firm. Must be experienced in all phases of LP Gas management. Mail complete resume with references and salary requirements to Box 45, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

WEST COAST MANUFACTURER OF LP Gas industrial equipment wants sales representative for Midwest and East. Work would include setting up new distributors, calling on LP Gas dealers, servicing old accounts. Good future for aggressive salesman, with knowledge of LP Gas industry. Send complete information and references to Box 44, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

BUSINESS OPPORTUNITIES OFFERED

LPG BULK PLANTS. WE SPECIALIZE IN selling petroleum properties throughout Midwest. Have number desirable plants for sale. OLE BRODD, PETROLEUM MARKETERS, 605 Produce Bank Bldg., Minneapolis, Minnesota.

LP GAS BULK AND BOTTLE BUSINESS in Illinois. Gallonage 1,877,400 sales $284,267 all gas. Profit before taxes $71,253. 2,200 customers. $200,000 cash to handle terms. Federated Petroleum, Mel Putnam, 3230 University, Madison, Wis.

FOR SALE—SEVEN LP GAS COMPANIES within 125 mi. radius. Gallonage 7,000,000 annually in group 3 freight territory. Accounting and engineering analysis completed for group. Net earnings are excellent. Please furnish financial responsibility when replying. FEDERATED PETROLEUM Mel Putnam, 3230 University, Madison, Wis.

BUSINESS FOR SALE: GASOLINE AND oil, Butane and Propane—in this Southwest Kansas town, County Seat, population 900, on Colorado line. Wide territory to cover. Bobtail from Plant. Batterton Gas and Oil Company, Johnson, Kansas.

FLORIDA—LAND OF OPPORTUNITY

NEW Listings—3 LP Gas businesses from $75,000.00 to $150,000.00. An LP Gas business for sale in Florida is hard to find. This may be your opportunity to buy a business in fast growing Florida. Write for information.

SOUTHERN BUSINESS BROKERS
Post Office Box 6176, Charlotte 7, North Carolina.

BUSINESS OPPORTUNITIES OFFERED

FOR SALE: ESTABLISHED LP GAS BUSINESS in rich farming area of West Texas. Irrigation wells plus tractors, plus domestic consumers makes a profitable year around operation. Will sell 1,200,000 gallons this year. Close to refinery. Owner and 2 employees can operate. Can be financed to right party. Reply Box 43, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

FOR SALE—LP GAS AND APPLIANCE business in Mid-western town of 40,000 doing annual business of over $200,000. Eight trucks, 30,000 gallons storage. Over 400 tank customers. Good bottle business. Reason for selling, owner's health. Reply Box 42, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

FOR SALE — TRUCKS - TRAILERS

NEW 1800 WG U-69 DELIVERS MORE GAS IN LESS TIME! This Nor-Tex Twin Delivery Unit is equipped with high flow piping throughout. Mounted on your choice of truck or on your present truck chassis for only $2,194.80 (including tax). Trim skirting, ICC lights, Viking mechanical seal pump, P.T.O. spline jack shaft and 50 ft. of filler hose. Call NOR-TEX PRODUCTS COMPANY collect, C-5416, Denton, Texas.

FOR SALE—USED DELIVERY TRUCKS. Several late model Propane Delivery trucks, 1200 to 1600 WG, piped and ready to go. EASY TERMS. White River Distributors, Inc., Phone 570, Batesville, Arkansas.

1800 WG MODEL 100, 250 LB. WP TRIM-skirted tank, mounted on 1956 Chev. Model 6405 chassis, 2 speed, 9 x 22½, 10 ply rear tires, ONLY $4,081.00, Fed. Tax paid. Packaged Plumbing, meter, etc. available at regular prices. EASY TERMS, White River Distributors, Inc., Batesville, Ark.

YOU'LL SAVE MORE TIME AND MONEY with a Nor-Tex "Package Unit." Any user will tell you, "They earn more! They cost less!" Mount this 1400 WG U-69 Twin Delivery Unit on a new truck of your choice or on a truck you now have for only $1,935.00 (Includes tax and mounting cost). It delivers more gas in less time because it's equipped with high flow piping throughout. Trim skirting, P.T.O. spline jack shaft, Viking mechanical seal pump, 50 ft. filler hose and ICC lights. Painted white enamel over red oxide. Call NOR-TEX PRODUCTS COMPANY collect, C-5416, Denton, Texas.

DELIVERY UNITS: SINGLE OR Twin Barrel. Our prices are competitive. We invite comparison between the equipment and price on our units with any competitive units. We believe we can give you the highest payloads per pound of gross vehicle weight. Write, wire, or phone, Lubbock Machine & Supply Co., Inc. Drawer 1589, Lubbock, Texas.

FOR SALE - TRUCKS - TRAILERS-Cont.

FOR SALE—TRUCKS, TRAILERS—FOR something different in propane tanks, see Master Tank & Welding (Dallas) advertisement in this edition.

FOR SALE: 1—1953 F-600 2 T FORD Truck with 1570 W. C. gallon twin propane tanks, unit equipped with Century carburetion, L-190 Viking pump, 433 Neptune Print-O-Meter, hoses, etc. Price $4,000. Write or call Butane Propane Service, Inc., Holyoke, Colorado.

FOR SALE

5000, 5800, 6000 WATER GALLON U 69; UW 1950; TANDEM PROPANE TWIN BARREL TANKS, also 7000 water gallon ASME 1952 DROP SECTION SINGLE BARREL TANKS your choice of any with 50% 10/20 tires, air brakes, now operating Texas R.R. Commission ICC and ASME approved. Prices from $3,000.00 to $6,000.00 delivered to most northern cities for $200.00 additional.

Write for pictures and details
IRVIN F. NELIS ASSOCIATES,
P.O. Box 14472, Houston 25, Texas

TRANSPORTS: SINGLE OR TWIN barrel; new or used; for lease, or sale on budget or rental sale plan. If you want maximum payload, with all of the latest equipment engineered to fit your truck, roads, and your hauling problem, get the LMC PAYLOADER
Contact Lubbock Machine & Supply Co., Inc., Drawer 1589, Lubbock, Texas.

FOR SALE—TANKS, CYLINDERS

ABOVE GROUND
PROPANE TANKS

115 to 1000 Gallons

Long Term Financing Available

FREE DELIVERY
In Our Trade Territory

Write TODAY for Prices and Details

WHITE RIVER
DISTRIBUTORS, INC.
Batesville, Arkansas

TEXAS
MANUFACTURING CO.
Gainsville, Texas

CLASSIFIED Advertising

BPN

FOR SALE—TANKS, CYLINDERS - Cont.

FOR SALE: 21 GALLON VERTICAL U-69 200# WP Tractor tanks, complete with valves and fittings for liquid or vapor service. Ideal for hand burners, front mount tractor conversions and other farm power applications. Made by Santa Fe Eng. Co. Never used. $35 each—further discounts on quantities. Weis Butane Gas Co., Box 795, West Memphis, Ark.

SKID TANKS
— IN STOCK NOW —

3000 gallon size built especially rugged for oil field use. Write, wire or phone

Lubbock Machine & Supply Co., Inc.
P. O. Drawer 1589
Lubbock, Texas

PROPANE TRUCK TANKS

Model 100 with Trim Skirting.

Prices INCLUDE Federal Tax and Mounting on Chassis.

1400 WG — $1,395.00
1500 WG — $1,482.00
1800 WG — $1,676.00
2000 WG — $1,892.00
2200 WG — $2,108.00

Your choice of 5 Models, 600 to 2300 WG Twin or Single.

Packaged Plumbing, pumps, meters, etc., and all makes of trucks available.

LOW DOWN PAYMENT, up to 3 Years to Pay. Write for Descriptive Folder.

WHITE RIVER DISTRIBUTORS, INC.
Batesville, Arkansas

WANT TO BUY a Bulk Plant or BOTTLED GAS BUSINESS?

■

A classified ad in BUTANE-PROPANE News will bring quick results at a minimum cost. Box 145 got 28 replies to his $11 ad—less than 40¢ a reply!

FOR SALE—MISCELLANEOUS

DECALS MADE FOR TRUCKS, EQUIPMENT. Small or large quantities. Catalog free. Mathews Co., 827 S. Harvey, Oak Park, Ill.

FOR SALE — IMMEDIATE DELIVERY! Eureka Smokehouse Burner Assemblies! For meat smoke houses using bottled gas. Completely automatic. Clean filtered smoke. Distributes heat uniformly. Low gas consumption. Automatic temperature and pilot control. Less product shrinkage. Easily installed. Write for descriptive pamphlet. Eureka Equipment Company, P.O. Box 396, Beloit, Wisconsin.

SERVEL REFRIGERATORS
CLEAN — ALL CHECKED OK
Model M500A .....$15.00 each
Model N500A .....$18.00 each
In lots of 12 or more.
FRED A. BROWN COMPANY
100 E. Allegheny Avenue
Philadelphia 34, Penna.
Est. 1918 REgent 9-1130

WE AT CORKEN'S
KNOW YOU ARE LOOKING FOR THE TRUCK PUMP OF TRUCK PUMPS. WE'VE BEEN WORKING ON IT THREE YEARS.

SERVEL GAS REFRIGERATORS

R400A	W600A
S400A	BN600A

Used: guaranteed in good operating condition. Modern, attractive, excellent condition. Low delivery cost anywhere. Send for illustrated folder NOW.

BEACH REFRIGERATOR CO.
196-11 Northern Blvd. Flushing 58, N. Y.
Phone FLushing 7-6161

WANTED—MISCELLANEOUS

WANTED—USED 60 and 100# BOTTLES. PREFER light weight. Will buy others if the price is right. Prefer carload lots. Telephone or write Pat Griffin, Fort Collins, Colorado.

PROFESSIONAL SERVICES

INDIVIDUALLY DESIGNED Ammonia and LP Gas Plants
H. Emerson Thomas & Assoc., Inc.
Westfield, N. J.

PROFESSIONAL SERVICES - Cont.

LP GAS INSTALLATIONS and
ANHYDROUS AMMONIA PLANTS
DESIGNED AND INSTALLED
"There's No Substitute For Experience"
PEACOCK CORPORATION
Paul E. Peacock, Jr., Pres.
Box 268, Westfield, N. J.

L. P. GAS INSURANCE

Have your agent write us about our Complete and Comprehensive Coverage for Adequate Limits of Liability at Reasonable and Normal Rates with Specialized Safety Engineering and Claim Service. Available only in Alabama, Arkansas, Arizona, Georgia, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma and Texas.

PAN AMERICAN FIRE & CASUALTY COMPANY
Earl W. Gammage, President
P. O. Box 1662 Houston, Texas

MISCELLANEOUS SERVICES

BUSINESS RECORD FORMS. ALL-WEATHER EZE-SNAP delivery invoices, for use when making LP gas metered truck deliveries. 1000 sets (3 part) imprinted with name, addres and telephone. $17.50 per 1000 sets. DEGREE DAY SYSTEMS, WOODSIDE 77, L. I., N. Y.

CLIENTS OFTEN INCREASE PROFITS 2% or more by using my cost reducing bulk and bottle operating procedures and sales procedures. Property evaluations and special assignments also handled. Floyd F. Campbell, Management Counselor, 821 Crofton Ave., Webster Grove 19, Mo.

SELL MORE WITH DISPLAY CLASSIFIED ADS

This is an example of the attention getting type faces available in display ads in the BPN Classified Section. Cost is only $12.00 a column inch per issue, an ad this size (3") is $36.00. The large lines above are set in 18 pt. Other available sizes are shown below.

14 POINT DISPLAY
12 POINT DISPLAY
10 POINT DISPLAY

Body type is set in 6 pt. like this sample. An average of 6 words to the line.

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Champion Bronze Powder & Paint Co. —
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Dearborn Stove Co. 95
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*Delta Tank Mfg. Co. —
Dix Carburetor Co. 136
*Dixie Products, Inc. —
Dixon Valve & Coupling Co. —
*Downingtown Iron Works, Inc. Div. of Pressed Steel Tank Co. —
Drake & Townsend, Inc. —

Eisele & King, Libaire, Stout & Co. —
Electro Products Co. —
Ellis, Geo. D. & Sons, Inc. 112
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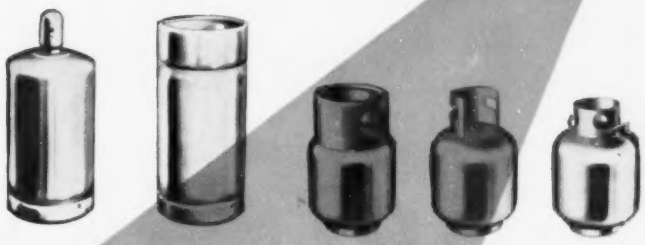

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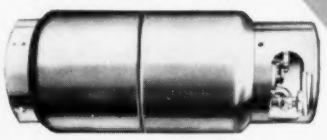

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